

ELE	ECTRICAL CONVENTIONS
<u>LIGHTING</u>	
	— LUMINAIRE TYPE — SEE LUMINAIRE SCHEDULE
A CO	— CIRCUIT NUMBER
1b <del>-</del>	— CONTROL POINT DESIGNATION (IF MORE THAN ONE)
A	— ALL LAMPS ON EMERGENCY CIRCUIT
	— NUMBER OF CONTROL POINTS
2\$ <del>ab</del>	TYPE OF CONTROL
	— CONTROL ZONE REFERENCE
<u>REFERENCE</u>	
1)-	<ul> <li>SPECIAL NOTE (APPLIES WHERE INDICATED ON THE DRAWING)</li> </ul>
D.1 <del>&lt;</del>	— DRAWING NOTE (APPLIES TO ENTIRE DRAWING)
G.1 <del>≺</del>	— GENERAL NOTE (APPLIES TO ENTIRE DRAWING SET)
WIRING	
Φ <sup>5</sup> <u></u>	— INDICATES PANELBOARD CIRCUIT DESIGNATION — DEVICE TYPE
1,3,5(LP−1) —►►►	BRANCH CIRCUIT HOMERUN TO PANEL "LP-1", CIRCUITS #1,3,5 (VIA 1P-20A CBS), PROVIDE INSULATED GROUND CONDUCTOR IN ACCORDANCE WITH SPECIFICATIONS, NUMBER OF CIRCUITS INDICATED BY QUANTITY OF ARROW HEADS.
	CONCEALED CONDUIT IN CEILING OR WALLS
	GENERAL NOTE: WHERE WIRE SIZE IS INDICATED AT THE HOMERUN OR ON THE SCHEDULE TO BE LARGER THAN THE SPECIFIED MINIMUM PROVIDE THE INDICATED WIRE SIZE THROUGHOUT THE ENTIRE BRANCH CIRCUIT.
MOUNTING HEIGH	<u>TS</u>
φ+	— INDICATES DEVICE TO BE MOUNTED     8" ABOVE COUNTERTOP BACKSPLASH     — DEVICE TYPE
PRESENTATION	
	ELECTRICAL EQUIPMENT DESIGNATED BY SOLID HEAVY LINEWEIGHT INDICATES NEW WORK TO BE PROVIDED.
	ELECTRICAL EQUIPMENT DESIGNATED BY SOLID LIGHT LINEWEIGHT INDICATES EXISTING EQUIPMENT TO REMAIN, UNLESS OTHERWISE INDICATED.
	ELECTRICAL EQUIPMENT DESIGNATED BY DASHED HEAVY LINEWEIGHT REPRESENTS EXISTING EQUIPMENT TO BE REMOVED AND DISPOSED, UNLESS INDICATED TO BE REMOUNTED, RELOCATED, OR TURNED OVER TO OWNER.

GENERAL ELECTRICAL COMMUNICATIONS NOTES

) ALL CABLES MUST BE ONE CONTINUOUS RUN BETWEEN WORK STATION AND COMMUNICATIONS CLOSET — NO SPLICES.

A) ALL DATA SHALL BE TERMINATED ONTO CAT-5E RATED PATCH PANELS RJ-45. DATA CABLES SHALL BE TERMINATED USING EIA/TIA-568A WIRING CONFIGURATION. DATA CABLES SHALL BE TERMINATED INTO PATCH PANELS MOUNTED ON

B) ALL VOICE CABLES SHALL BE TERMINATED ONTO 110 WALL MOUNTED BLOCKS. CABLE NUMBERING WILL CONTINUE

C) CONTRACTOR SHALL PROVIDE PATCH PANELS AND 110 WALL MOUNTED BLOCKS AS REQUIRED FOR A COMPLETE

A) ALL DATA CABLES SHALL BE TERMINATED ON CAT-5E RATED RJ-45 JACK INSERTS, USING EIA/TIA-568A WIRING

A) ALL CABLES SHALL BE NUMBERED SEQUENTIALLY AND MECHANICALLY STENCILED WITH BLACK INK — NOT HAND

B) IF CABLE NUMBERS ALREADY EXISTS IN COMMUNICATIONS ROOMS, NUMBER LABELING SEQUENCE SHALL BE A CONTINUATION OF EXISTING CABLE NUMBERS ALREADY IN PLACE ON DATA PATCH PANELS AND VOICE CABLES.

A) ALL CABLES SHALL BE HOME RUN FROM EACH WORKSTATION AREA TO THE DESIGNATED COMMUNICATIONS ROOM.

E) ALL WALL PENETRATIONS MADE ABOVE CEILINGS THROUGH FIRE RATED WALLS SHALL BE SEALED WITH FIRE RATED

F) CABLES IN COMMUNICATION ROOMS SHALL BE NEATLY RUN INTO RACK COMPATIBLE CABLE MANAGEMENT SYSTEMS

6) SELECTION OF MATERIAL: ALL MATERIALS SELECTED FOR USE BY INSTALLATION CONTRACTOR MUST BE APPROVED BY

7) TESTING CABLE: ALL CABLES INSTALLED MUST BE TESTED AND VERIFIED FOR FULL 100MB TRANSMISSION SPEED AND CONTINUITY TO VERIFY THAT ALL PAIRS ARE FUNCTIONAL TO SUPPORT VOICE AND DATA SYSTEMS. TEST RESULTS MUST BE PRINTED AND PROVIDED TO VA TELECOMMUNICATIONS PERSONNEL PRIOR TO ACCEPTANCE OF THE WORK

A) IF EXISTING CABLE APPEAR TO BE FEASIBLE, PRIOR TO DISCONNECTING OR REMOVING CABLE IN CONSTRUCTION AREA, IDENTIFY CABLE NUMBER ASSOCIATED WITH EACH CABLE. THE ORIGINAL CABLE NUMBERS MUST BE STENCIL ON THE

B) AFTER TERMINATION, ALL REUSED CABLES MUST BE TESTED TO CONFORM WITH CONTINUITY TESTING AND 100 MEGB

9) QUALIFICATIONS: ALL CABLE INSTALLATION AND TERMINATIONS MUST BE INSTALLED BY TRAINED AND CERTIFIED PERSONNEL MEETING CERTIFICATION STANDARDS, I.E., EIA, TIA, ANSI, BICSI, TDM, ITU-R, NFPA, NEC AND NCS.

MATERIALS. IF EXISTING CONDUITS ARE USED AND FIRE STOPPER MATERIAL IS REMOVED FROM CONDUITS. CONDUITS

B) ALL CABLES IN AREAS WITH SUSPENDED CEILINGS SHALL BE SUSPENDED IN CEILING USING J-TYPE HOOKS.

C) ALL CABLES IN WAREHOUSE AREAS, OR OTHER AREAS WITHOUT CEILING SHALL BE ROUTED IN CONDUIT. D) IN OFFICE AREAS ALL CABLES SHALL BE INSTALLED INSIDE WALLS AND NOT VISIBLE ON WALL SURFACES.

C) ALL VOICE CABLES SHALL BE TERMINATED ONTO RJ-11 JACK INSERTS USING STANDARD USOC WIRING CONFIGURATION.

E) ALL JACK INSERTS SHALL BE INSTALLED ONTO FLUSH WALL MOUNTED FACE PLATES. FACE PLATES SHALL BE OFFICE

WRITTEN. CABLE NUMBER LABELS SHALL BE PLACED AT BOTH ENDS OF EACH CABLE, ON PATCH PANELS. AND WALL

INSTALLATION. COORDINATE WITH RESIDENT ENGINEER FOR ADDITIONAL REQUIREMENTS.

	ELECTRICAL A	ADDKEVIA	4110112
Α	AMPERE	MCB	MAIN CIRCUIT BREAKER
ACH	ABOVE CABINET HEIGHT	MCC	MOTOR CONTROL CENTER
<b>ACU</b>	AIR CONDITIONING UNIT	MCP	MOTOR CIRCUIT PROTECTOR
<b>AFF</b>	ABOVE FINISHED FLOOR	MDP	MAIN DISTRIBUTION PANEL
AFG	ABOVE FINISHED GRADE	MH	MANHOLE
AHU	AIR HANDLING UNIT	M/L	MAIN LUGS
AIC	AMPERE INTERRUPTING CAPACITY	MÓA	MULTI OUTLET ASSEMBLY
ASYM	ASYMMETRICAL	MSP	MOTOR STARTER PANEL
ATS	AUTOMATIC TRANSFER SWITCH	MTD MV	MOUNTED MEDIUM VOLTAGE
C CB	CONDUIT CIRCUIT BREAKER	NC	NORMALLY CLOSED
CCTV	CLOSED CIRCUIT TELEVISION	NCEC	
CKT	CIRCUIT	NF	NON-FUSED
CT	CURRENT TRANSFORMER	NO NO	NORMALLY OPEN
CX	CONNECT TO EXISTING	NTS	NOT TO SCALE
DP	DISTRIBUTION PANEL	OCP	OVERCURRENT PROTECTION
DT	DOUBLE THROW	OH	OVERHEAD
DWC DWG	DRINKING WATER COOLER Drawing	P	POLE(1P., 2P., 3P.)
טווט		PB	PUSH BUTTON
E	EMERGENCY	PH	PHASE
EBH	ELECTRIC BASEBOARD HEATER	PL	PILOT LIGHT
EQUIP	EQUIPMENT	PP	POWER PANEL
ETR	EXISTING TO REMAIN	PT	POTENTIAL TRANSFORMER
EWH	ELECTRIC WATER HEATER	PVC	POLYVINYL CHLORIDE
EX	EXISTING	R	RACEWAY
F	FUSED OR FUSIBLE	RCS	REMOTE CONTROL SWITCH
FA	FIRE ALARM	RP	RECEPTACLE PANEL
FCP	FIRE ALARM CONTROL PANEL	RX	REMOVE EXISTING
FCU	FAN COIL UNIT	CM	COLID MELITOM
FDR	FEEDER	SN SS	SOLID NEUTRAL SAFETY SWITCH
GFI	GROUND FAULT INTERRUPTER	ST	SINGLE-THROW
GFI	GROUND WIRE	SW	SWITCH
VII	ONOOND MINE	SWBD	SWITCHBOARD
HOA	HAND-OFF-AUTOMATIC	SWGR	SWITCHGEAR
HP	HORSE POWER	SYM	SYMMETRICAL
HPU	HEAT PUMP UNIT		
HV 	HIGH_VOLTAGE	TS	TIE SWITCH
HZ	HERTZ	TTB	TELEPHONE TERMINAL BOARD
ICEC	INTERCOM EQUIPMENT CABINET	TYP	TYPICAL
IG	ISOLATED GROUND	UG	UNDERGROUND
		UH	UNIT HEATER
JB	JUNCTION BOX	ÜÖN	UNLESS OTHERWISE NOTED
KCMIL KV	THOUSAND CIRCULAR MILS KILO-VOLTS	V	VOLTS
rv KVA	KILO-VOLTS KILO-VOLT-AMPERE	<b> </b>	VULIJ
KW	KILO-VOLT-AMITERE KILOWATTS	l w	WIRE
		WP	WEATHER PROOF
LAD LC	LOCATE AS DIRECTED LOAD CENTER	XFMR	TRANSFORMER
LU		VI MILY	TIVITALI OTNINETY
LP	LIGHTING PANEL		

SYMBOL	DESCRIPTION	HEIGHT
0 0	LUMINAIRE - SEE SCHEDULE FOR TYPE (NOMINAL 2X2)	
0 0	LUMINAIRE - SEE SCHEDULE FOR TYPE (NOMINAL 2X4)	
	LUMINAIRE - SEE SCHEDULE FOR TYPE (NOMINAL 1X4)	
<del>О</del>	LUMINAIRE - SEE SCHEDULE FOR TYPE (STRIP)	
⊗t H⊗t	ILLUMINATED EXIT SIGN, SINGLE FACE — SEE SCHEDULE FOR TYPE (ARROW INDICATED DIRECTIONAL CHEVRON) (CEILING AND WALL MOUNTED)  ILLUMINATED EXIT SIGN, DOUBLE FACE — SEE SCHEDULE FOR TYPE	/ 90" / 90"
•\$	(CEILING AND WALL MOUNTED)  SINGLE POLE TOGGLE SWITCH	46"
•\$ <sub>3</sub>	THREE-WAY TOGGLE SWITCH	46"
_	LIGHTING CONTROL SYSTEM — LOW VOLTAGE SWITCH FOR ONE ZONE,	46"
*\$ <sub>LV</sub>	ON/OFF CONTROL.  LIGHTING CONTROL SYSTEM — LOW VOLTAGE SWITCH FOR ONE ZONE,	46"
	ON/OFF AND UP/DOWN DIMMING.	
\$0S	OCCUPANCY SENSOR WALL SWITCH, PIR  OCCUPANCY SENSOR WALL SWITCH, MULTI-TECHNOLOGY, DUAL WITH	46"
*SDUAL OS	ADAPTABILITY  OCCUPANCY SENSOR — MULTI TECHNOLOGY, CEILING MOUNTED,	46"
<b>◆</b> <sub>500</sub>	500 SQ FT RANGE	
<b>\$</b> 1000	OCCUPANCY SENSOR — MULTI TECHNOLOGY, CEILING MOUNTED, 1000 SQ FT RANGE	
<b>\$</b> 2000	OCCUPANCY SENSOR — MULTI TECHNOLOGY, CEILING MOUNTED, 2000 SQ FT RANGE	
<b>♦</b> HB	OCCUPANCY SENSOR — PIR, CEILING MOUNTED, HIGH BAY, 360 DEGREE OR AISLE LENS	
<b>Ф</b> <sub>P450</sub>	OCCUPANCY SENSOR - PIR, CEILING MOUNTED, 450 SQ FT RANGE	
◆ <sub>P1500</sub>	OCCUPANCY SENSOR - PIR, CEILING MOUNTED, 1500 SQ FT RANGE	
<b>♦</b> <sub>U1000</sub>	OCCUPANCY SENSOR — ULTRASONIC, CEILING MOUNTED, 1500 SQ FT RANGE	
$\bowtie_{W}$	OCCUPANCY SENSOR - MULTI TECHNOLOGY, WALL MOUNTED, WIDE VIEW	92"
PS PS	PHOTOSENSOR (WALL AND CEILING MOUNTED)	
<b>+</b>	RECEPTACLE - NEMA CONFIGURATION 5-20R DUPLEX	18"
<b>≠</b>	RECEPTACLE - NEMA CONFIGURATION 5-20R QUAD	18"
=⊖ GFI =⊖ GFI	RECEPTACLE - NEMA 5-20R DUPLEX WITH 5mA GROUND FAULT INTERRUPTER	18"
H	RECEPTACLE — TYPE AS INDICATED ON DRAWING	18"
•\$ <sub>M</sub>	FRACTIONAL HORSEPOWER MANUAL MOTOR SWITCH	46"
<b>⊘</b>	MOTOR	
ㅁ	SAFETY SWITCH	60" TO TOP
0	JUNCTION BOX IN CEILING	
Ю	JUNCTION BOX — WALL MOUNTED	AS NOTED
	PANELBOARD	78" TO TOP
T#	DRY TYPE TRANSFORMER — SIZE AS INDICATED (PAD MOUNTED SEE DETAIL)	
VFD	VARIABLE FREQUENCY DRIVE	
<u> </u>	COMBINATION TELEPHONE/DATA OUTLET, WALL MOUNTED	18"
И	TELEPHONE OUTLET, WALL MOUNTED, WITH PULL TELEPHONE MOUNTING LUGS	52"
$\bowtie_{w}$	1 1915/1/1911191/ 1 1/1/5/3	

ELECTRICAL LEGEND

DESCRIPTION

SYMBOL

MOUNTING

- 1. THE MOUNTING HEIGHTS GIVEN ON THIS SHEET IN THE ELECTRICAL LEGEND ARE GENERAL AND SHALL BE USED ONLY WHEN MOUNTING HEIGHTS CANNOT BE ESTABLISHED BY REFERENCE TO DETAILS, ELEVATIONS, AND NOTES
- 2. ALL MOUNTING HEIGHTS, UNLESS OTHERWISE NOTED, SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE CENTERLINE OF THE OUTLET OR DEVICE.
- 3. HEIGHTS OF ALL ITEMS NOT COVERED BY THE ELECTRICAL LEGEND AND NOT SHOWN ON THE DRAWINGS SHALL
- BE AS DIRECTED BY THE ARCHITECT OR ENGINEER.
- 4. WHERE PLACING ANY ITEM AT THE HEIGHTS LISTED OR NOTED WILL CAUSE INTERFERENCE WITH THE WORK OF OTHER TRADES, OR IS NOT PHYSICALLY POSSIBLE OR DESIRABLE FOR ONE REASON OR ANOTHER, THE ITEM SHALL BE INSTALLED AT A LOCATION APPROVED BY THE ARCHITECT OR ENGINEER.

Additions:	Date
Revisions:	Date
SCHEMATIC DESIGN (30%) SUBMISSION	03/25/15
DESIGN DEVELOPMENT (60%) SUBMISSION	09/11/15
CONSTRUCTION DOCUMENTS (90% SUBMISSION)	11/23/15
BID DOCUMENTS	03/17/16

O 4' 8' 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16' | 16'

ARCHITECT / ENGINEERS / CONSULTANTS: OKKS Studios, Inc. Woods Peacock Engineering Consultants 2 Wisconsin Circle / Suite 820 5250 Cherokee Avenue, Suite 420 Chevy Chase, MD 20815-7003 Alexandria, VA 22312-2052 Tel: (301) 718-0080 Tel: (703) 658-4400 Fax: (301) 718-9520 Nobis Engineering, Inc.

Tel: (301) 528 2010

www.okksstudios.com

Engineers, LLC.

Baltimore, MD 21204

Tel: (410) 296-6500

Fax: (410) 296-6501

**Henry Adams Consulting** 

600 Baltimore Ave, 4th Floor

Fax: (703) 658-4404 20410 Century Boulevard, Suite 230 Germantown, MD 20874 The Protection Engineering Group 2809 Boston Street, Suite 7 Baltimore, MD 21224 USA Tel: (443) 708-4096



Approved: Chief, Facilities and Engineering |Approved: Approved: Associate Chief for Maintenance And Operations, Perry Point Approved: Engineering Projects Supervisor Approved: Infection Control Officer

Drawing Title **ELECTRICAL COVER SHEET** Approved: Associate Director for Operations Approved: Director, Medical Center

**FULLY SPRINKLERED** Project Title WAREHOUSE RENOVATION & EXPANSION

03/17/16 VA Project Number 512-530 Drawing Number

DEPARTMENT OF VETERANS AFFAIRS E001

|Building Number | | Checked | | Drawn JFR | MLS |

engineer under the laws of the State of Maryland. ense No. 41408, Expiration Date: 1/5/2018

THAT WAS PERFORMED.

TRANSMISSION SPEEDS.

TELEPHONE AND DATA REQUIREMENTS:

1) CABLE DESCRIPTION FOR STATION CABLERS:

A STANDARD 19-INCH DATA RACK.

) TERMINATING CABLE — AT WORK STATION

CONFIGURATION.

4) CABLE LABELING (NUMBERS ONLY)

A) ALL CABLES SHALL BE UNSHIELDED TWISTED 4-PAIR, CAT-5E RATED.

B) DATA CABLE SHEATH SHALL BE "DARK BLUE" IN COLOR.

C) VOICE CABLE SHEATH SHALL BE "GRAY" IN COLOR.

FROM THE EXISTING CABLES ALREADY IN PLACE.

3) ALL DATA JACK INSERTS SHALL BE BLACK IN COLOR.

) ALL VOICE JACK INSERTS SHALL BE OFFICE WHITE IN COLOR.

WHITE IN COLOR. EACH FACE PLATE SHALL BE A 4-PORT CONFIGURATION.

SHALL BE RESEALED WITH RATED MATERIALS ONCE CABLES ARE INSTALLED.

8) REUSE OF EXISTING CABLE (FOR USE WITH PRE-EXISTING STRUCTURES ONLY)

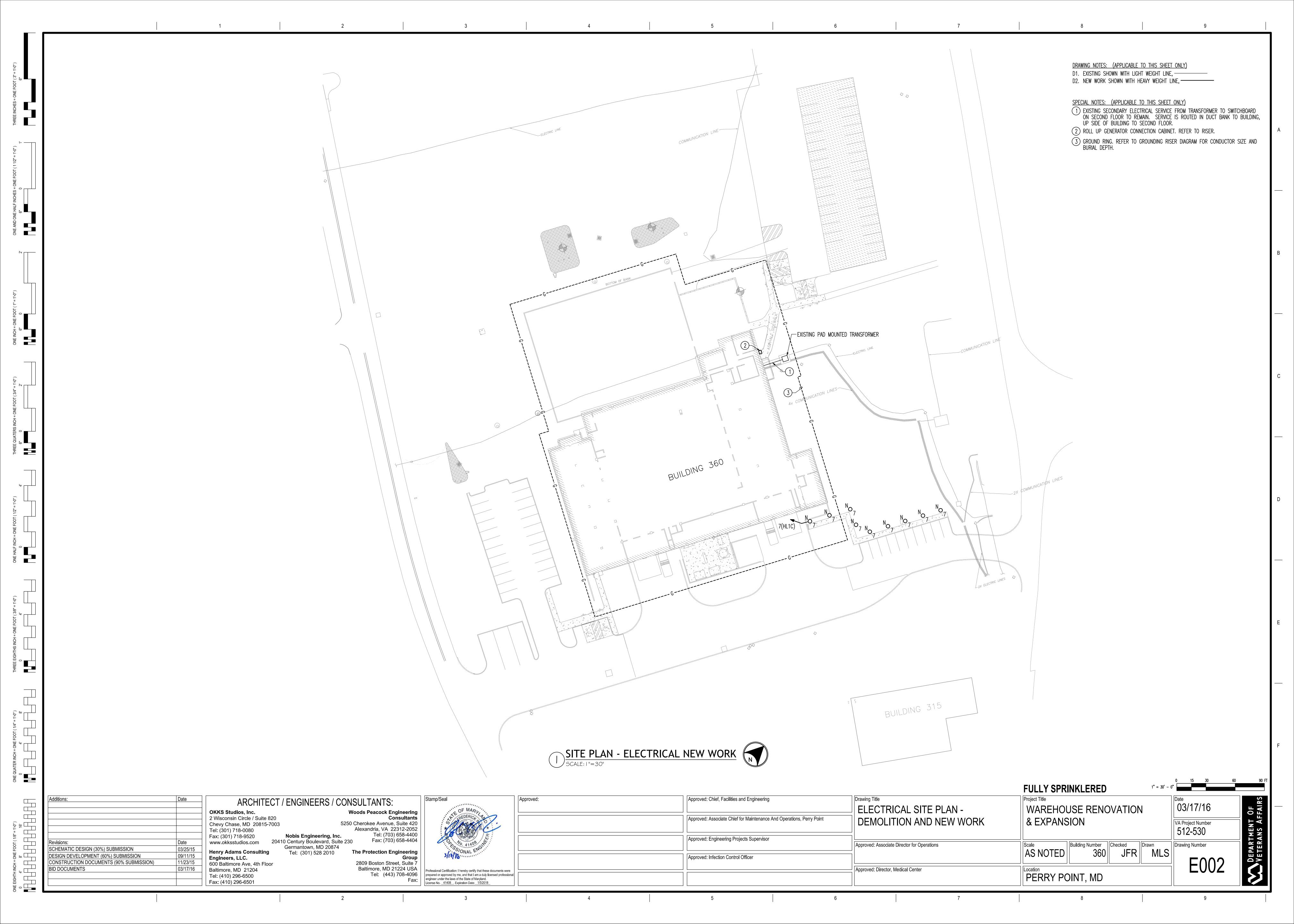
VA TELECOMMUNICATIONS PERSONNEL PRIOR TO INSTALLATION.

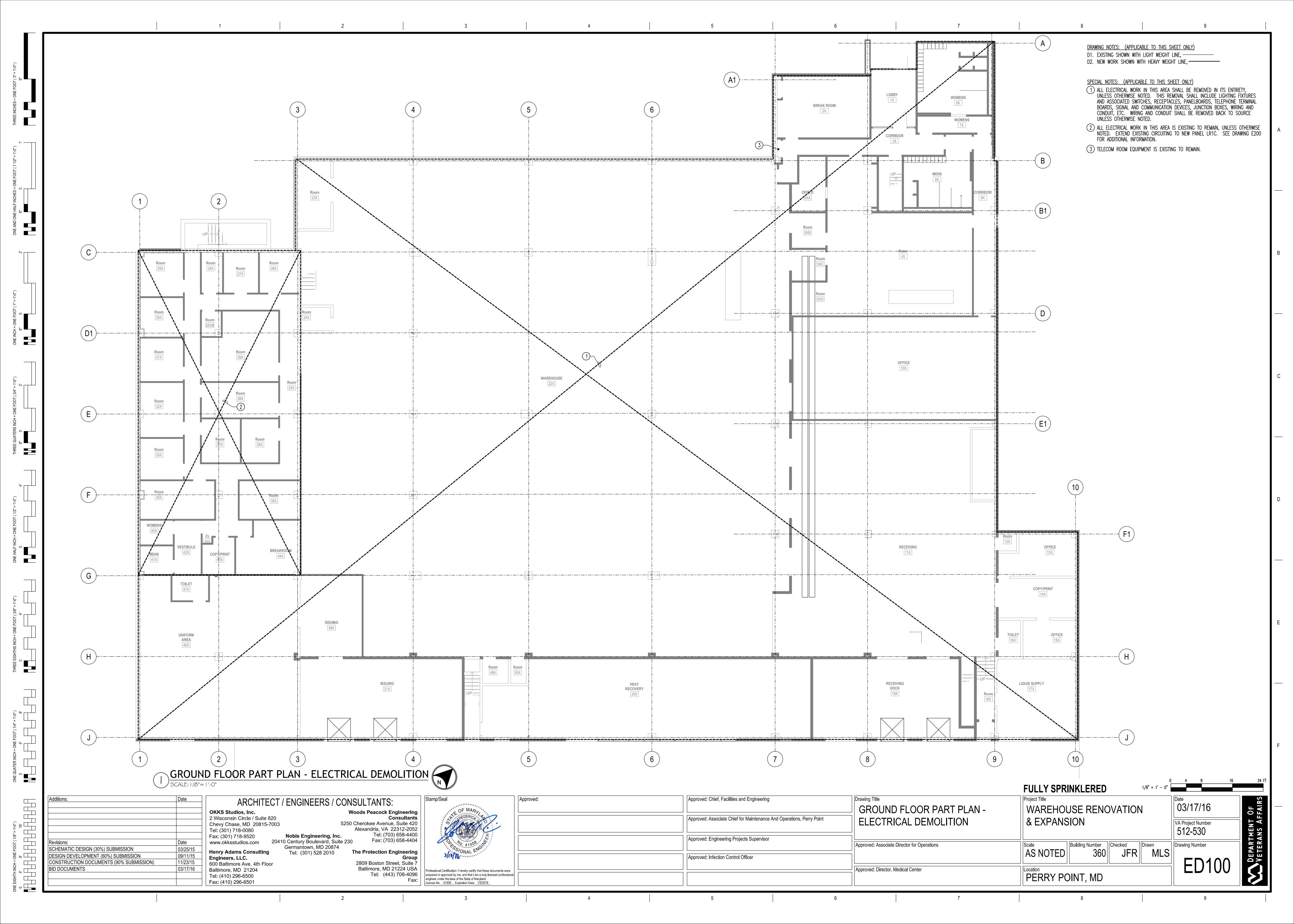
NEW FACE PLATE AT THE NEW WORK STATION JACK.

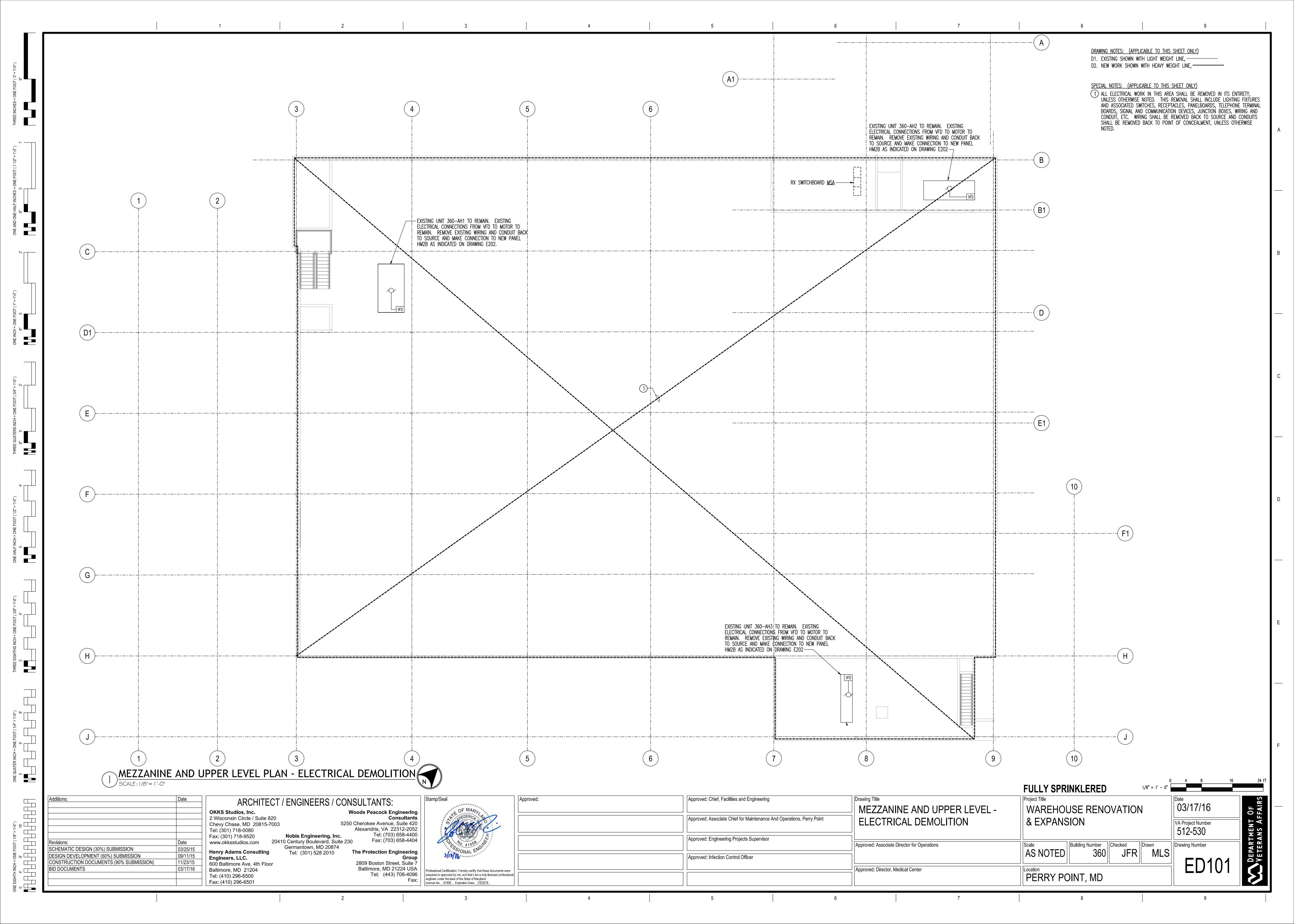
F) EACH WORK STATION SHALL BE WIRED WITH 2-DATA CABLES AND 1-VOICE CABLE.

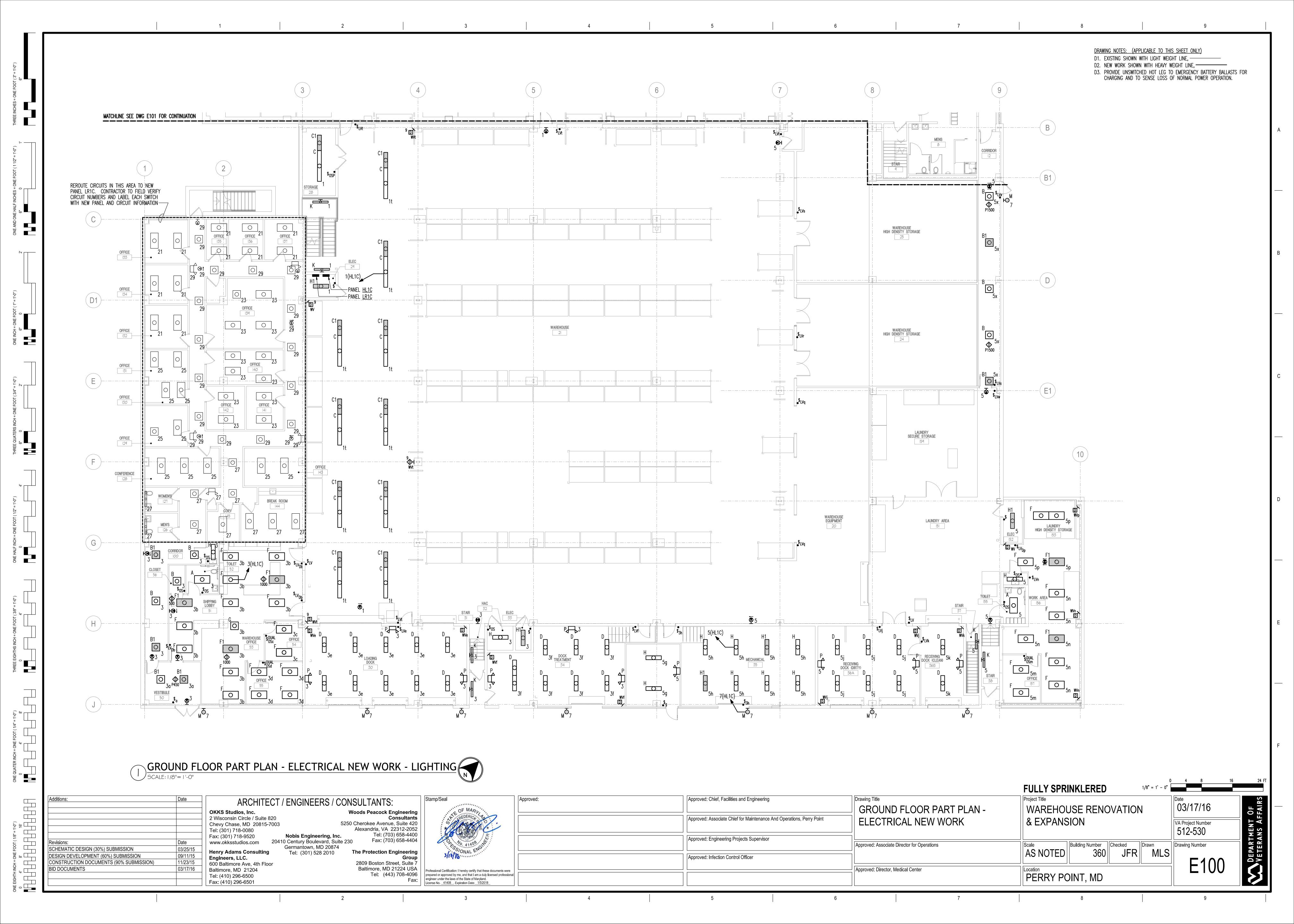
2) TERMINATING CABLE - IN COMMUNICATION ROOM

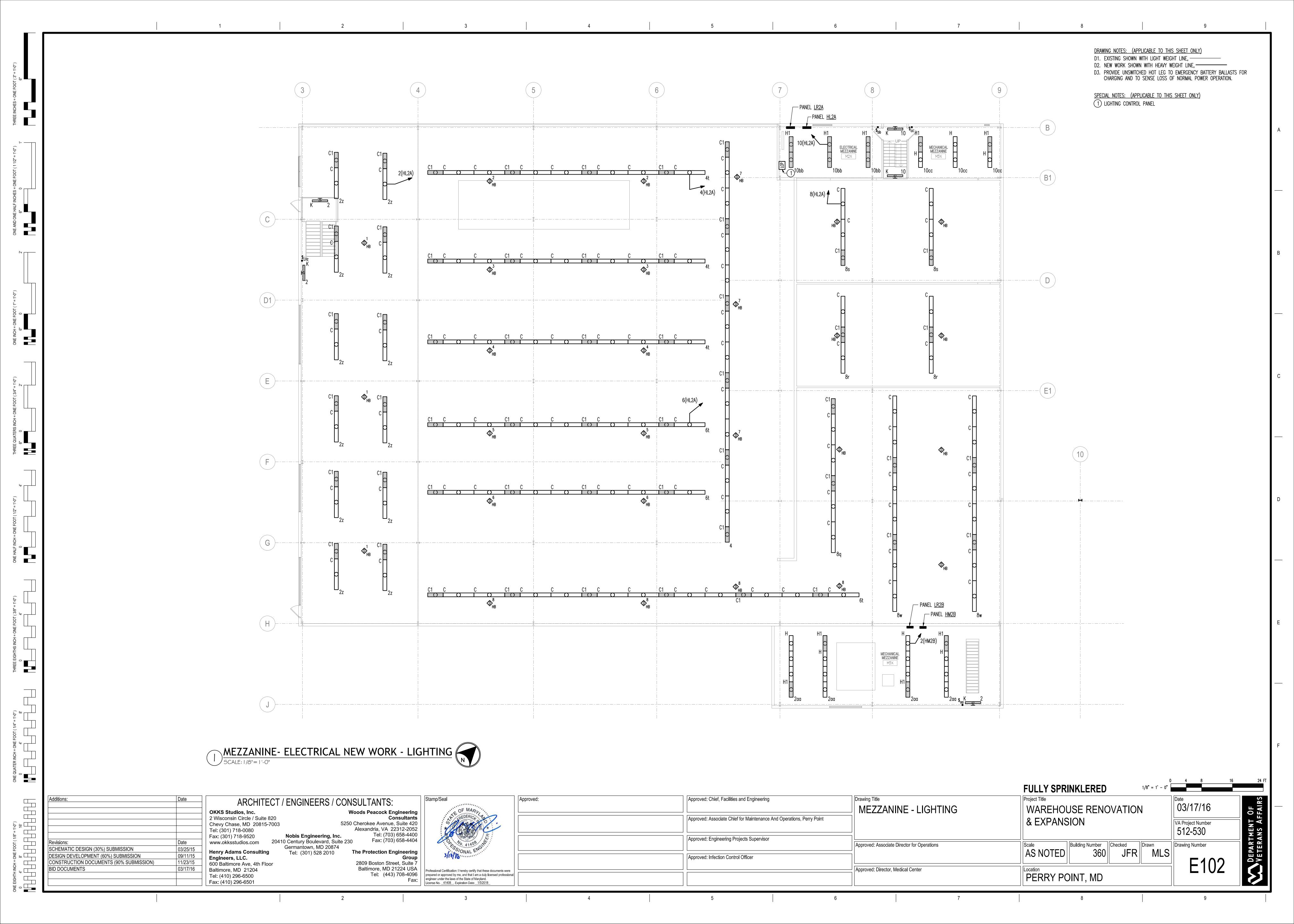
PERRY POINT, MD

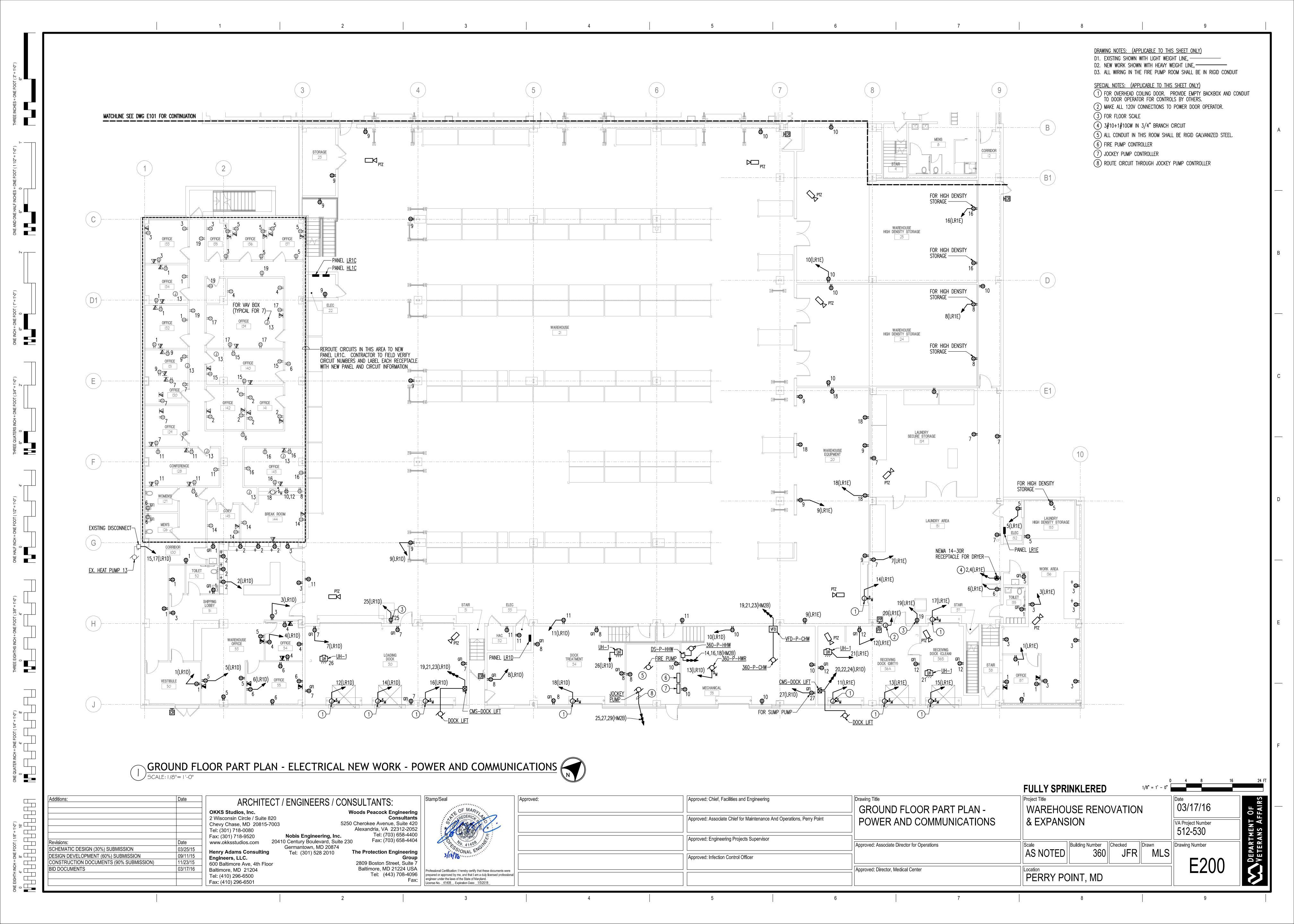


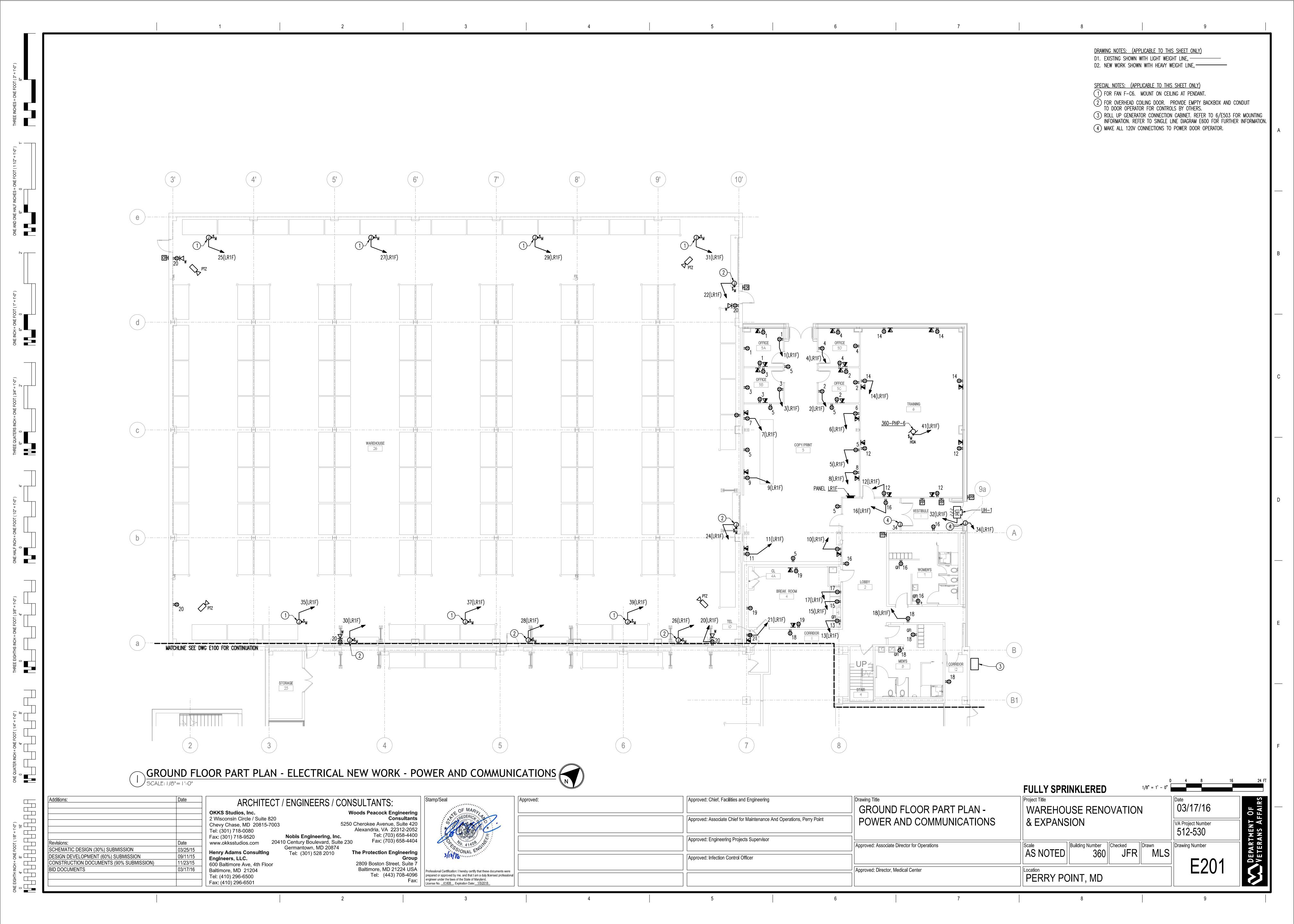


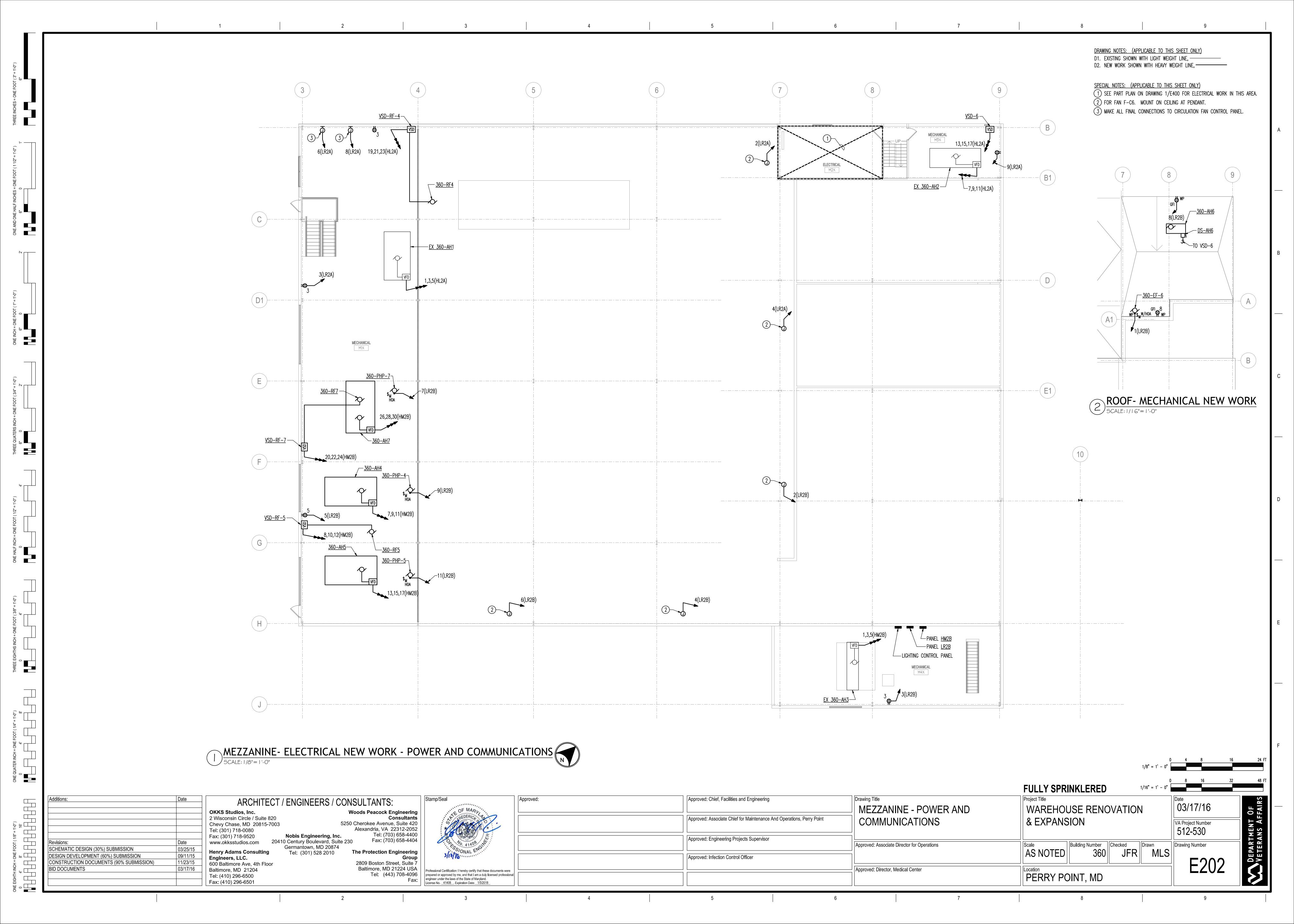


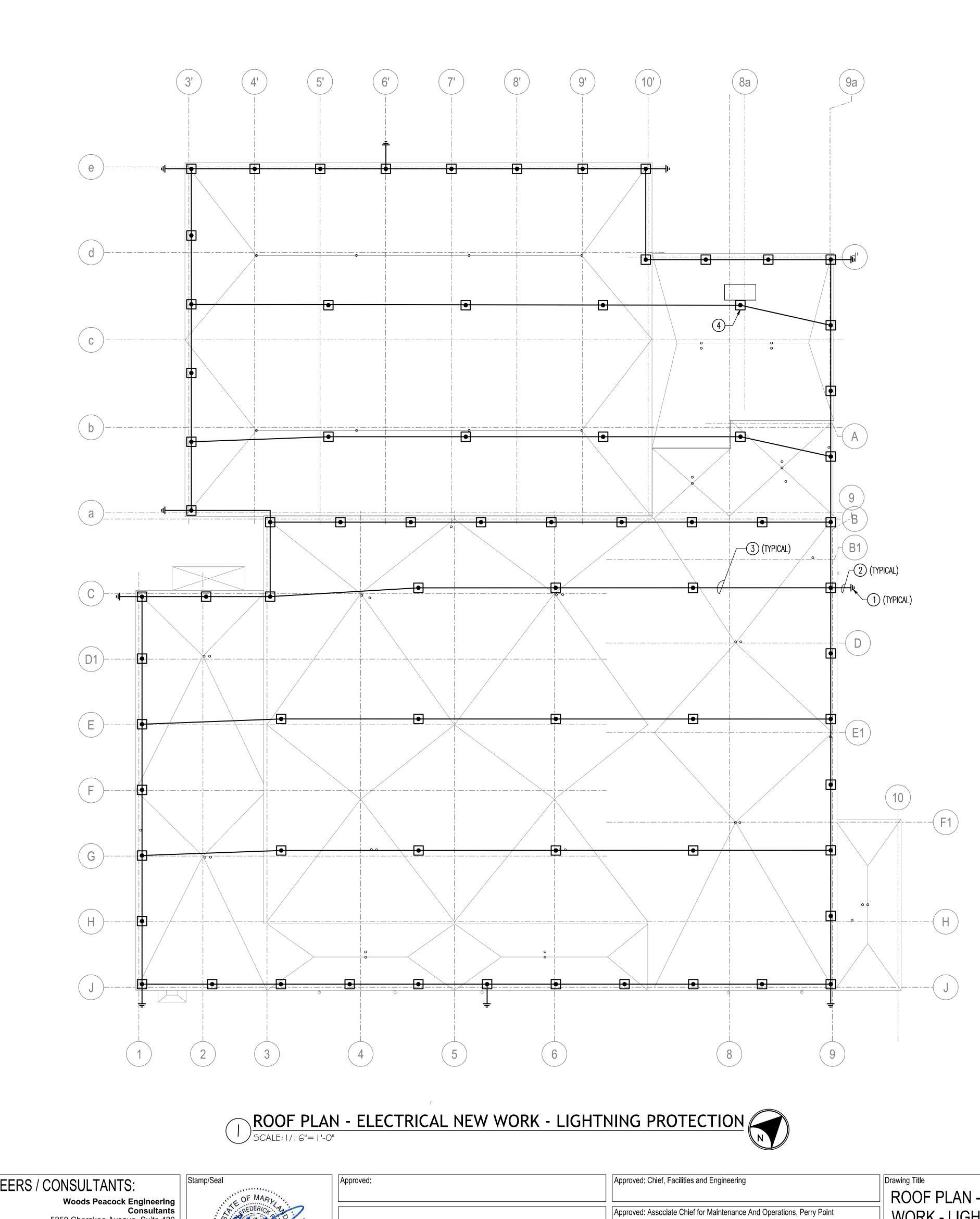












<u>DRAWING NOTES: (APPLICABLE TO THIS SHEET ONLY)</u> D1. THE LIGHTNING PROTECTION SYSTEM SHALL BE DESIGNED AND INSTALLED BY A LIGHTNING PROTECTION INSTITUTE CERTIFIED MASTER DESIGNER/INSTALLER. INSTALLED DESIGN SHALL BE

SUBMITTED AS SHOP DRAWING FOR APPROVAL. D2. THE DESIGN AND INSTALLATION OF THE LIGHTNING PROTECTION SYSTEM SHALL MEET THE REQUIREMENTS OF LPI-176 STANDARD

OF PRACTICE AND UL-96, UL-96A AND NFPA-780. D3. NEW LIGHTNING PROTECTION SYSTEM SHALL INCORPORATE EXISTING LIGHTNING PROTECTION COMPONENTS ON EXISTING ROOF AND WHEN COMPLETE, ENTIRE ROOF (NEW AND EXISTING) SHALL HAVE NEW COMPREHENSIVE UL MASTÈR LABEL.

D4. PROVIDE A UL MASTER LABEL FOR THE LIGHTNING PROTECTION SYSTEM OF THE ENTIRE BUILDING. PROVIDE ANY ADDITIONAL CABLE, CONNECTIONS, AIR TERMINALS, MISCELLANEOUS HARDWARE AND ACCESSORIES AS REQUIRED TO OBTAIN THE UL MASTER

D5. PROVIDE LIGHTNING PROTECTION SYSTEM BONDING TO ALL METAL BODIES ON THE ROOF AS REQUIRED BY NFPA 780, INCLUDING BUT NOT LIMITED TO THE FOLLOWING: METAL ROOF, MECHANICAL SYSTEM COMPONENTS, FLASHINGS, GUTTERS, LADDERS.

D6. WHERE DISSIMILAR METALS ARE BONDED OR CONNECTED, PROVIDE A BI-METALLIC CONNECTOR. D7. ALL CONNECTIONS TO THE COUNTER POISE GROUND LOOP AROUND

CONNECTIONS. MINIMUM 36" BFG. D8. PROVIDE ALUMINUM MAIN CONDUCTORS ON ROOFS AND COPPER DOWN CONDUCTORS FROM ROOF TO THE CONNECTION TO THE

BUILDING SHALL BE BELOW GRADE AND UTILIZE EXOTHERMIC WELD

SPECIAL NOTES: (APPLICABLE TO THIS SHEET ONLY)

UNDERGROUND COUNTER POISE GROUND LOOP.

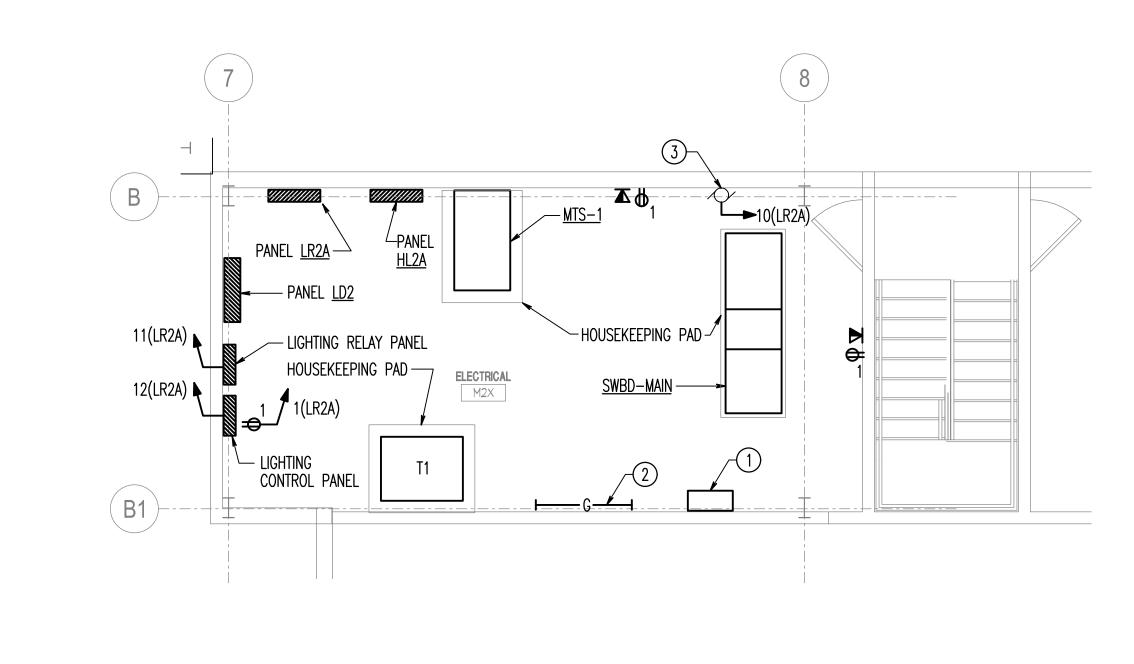
1) PROVIDE 10'-0" LONG X 3/4" DIAMETER COPPERCLAD STEEL GROUND ROD. EXOTHERMIC WELD TO LIGHTNING PROTECTION GROUND DOWN CONDUCTOR. BOND GROUND ROD TO GROUND RING. REFER TO DETAIL 8/E502.

(2) LIGHTNING PROTECTION SYSTEM DOWN CONDUCTOR IN 1" PVC SCH. 80 CONDUIT. CONCEAL CONDUIT IN EXTERIOR WALL. PROVIDE PITCH POCKETS OR EQUIVALENT MEANS TO SEAL PENETRATION. CONTRACTOR SHALL MAKE ALL PENETRATIONS WATERTIGHT.

(3) LIGHTNING PROTECTION SYSTEM CLASS 1 MAIN CONDUCTOR.

(4) AIR TERMINAL MOUNTED ON MECHANICAL EQUIPMENT.

**FULLY SPRINKLERED** DEPARTMENT OF VETERANS AFFAIRS ARCHITECT / ENGINEERS / CONSULTANTS: 03/17/16 ROOF PLAN - ELECTRICAL NEW WAREHOUSE RENOVATION OKKS Studios, Inc. 2 Wisconsin Circle / Suite 820 Chevy Chase, MD 20815-7003 WORK - LIGHTNING PROTECTION & EXPANSION VA Project Number 5250 Cherokee Avenue, Suite 420 Alexandria, VA 22312-2052 512-530 Tel: (301) 718-0080 Tel: (703) 658-4400 Fax: (301) 718-9520 Nobis Engineering, Inc. Approved: Engineering Projects Supervisor Fax: (703) 658-4404 20410 Century Boulevard, Suite 230 www.okksstudios.com Approved: Associate Director for Operations Building Number Checked Drawn Drawing Number Germantown, MD 20874 Tel: (301) 528 2010 SCHEMATIC DESIGN (30%) SUBMISSION JFR MLS AS NOTED The Protection Engineering Henry Adams Consulting 09/11/15 11/23/15 DESIGN DEVELOPMENT (60%) SUBMISSION Approved: Infection Control Officer **Engineers, LLC.** 600 Baltimore Ave, 4th Floor Group E300 CONSTRUCTION DOCUMENTS (90% SUBMISSION) 2809 Boston Street, Suite 7 Baltimore, MD 21224 USA BID DOCUMENTS 03/17/16 Approved: Director, Medical Center Baltimore, MD 21204 essional Certification: I hereby certify that these documents were Tel: (443) 708-4096 PERRY POINT, MD Tel: (410) 296-6500 Fax: (410) 296-6501 prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. icense No. 41408 , Expiration Date: 1/5/2018



DRAWING NOTES: (APPLICABLE TO THIS SHEET ONLY) D1. EXISTING SHOWN WITH LIGHT WEIGHT LINE, D2. NEW WORK SHOWN WITH HEAVY WEIGHT LINE,

SPECIAL NOTES: (APPLICABLE TO THIS SHEET ONLY) 1 ENCLOSED CIRCUIT BREAKER FOR FIRE PUMP. REFER TO ONE LINE DIAGRAM FOR ADDITIONAL INFORMATION.

(2) MAIN GROUNDING BUS BAR. REFER TO DETAIL 1/E502 AND 1/E501. (3) MAKE ALL FINAL CONNECTIONS TO EXISTING RELIEF FAN.

MEZZANINE- ELECTRICAL ROOM PART PLAN - POWER AND COMMUNICATIONS ) SCALE: 1/4"= 1'-0"

**FULLY SPRINKLERED** Project Title Approved: Chief, Facilities and Engineering Drawing Title Stamp/Seal ARCHITECT / ENGINEERS / CONSULTANTS: Approved: ELECTRICAL PART PLANS WAREHOUSE RENOVATION Woods Peacock Engineering Consultants OKKS Studios, Inc. 2 Wisconsin Circle / Suite 820 Chevy Chase, MD 20815-7003 Approved: Associate Chief for Maintenance And Operations, Perry Point & EXPANSION 5250 Cherokee Avenue, Suite 420 Alexandria, VA 22312-2052 Tel: (703) 658-4400 Tel: (301) 718-0080 Nobis Engineering, Inc. 20410 Century Boulevard, Suite 230 Germantown, MD 20874 ng Tel: (301) 528 2010 Th Fax: (301) 718-9520 Approved: Engineering Projects Supervisor Fax: (703) 658-4404 www.okksstudios.com Approved: Associate Director for Operations SCHEMATIC DESIGN (30%) SUBMISSION AS NOTED Henry Adams Consulting The Protection Engineering 09/11/15 11/23/15 DESIGN DEVELOPMENT (60%) SUBMISSION Approved: Infection Control Officer Engineers, LLC.
600 Baltimore Ave, 4th Floor Group CONSTRUCTION DOCUMENTS (90% SUBMISSION) 2809 Boston Street, Suite 7 BID DOCUMENTS Baltimore, MD 21224 USA Tel: (443) 708-4096 03/17/16 Baltimore, MD 21204 Approved: Director, Medical Center fessional Certification: I hereby certify that these documents were PERRY POINT, MD Tel: (410) 296-6500 Fax: (410) 296-6501 prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. License No. 41408 , Expiration Date: 1/5/2018

DEPARTMENT OF VETERANS AFFAIRS

03/17/16

VA Project Number

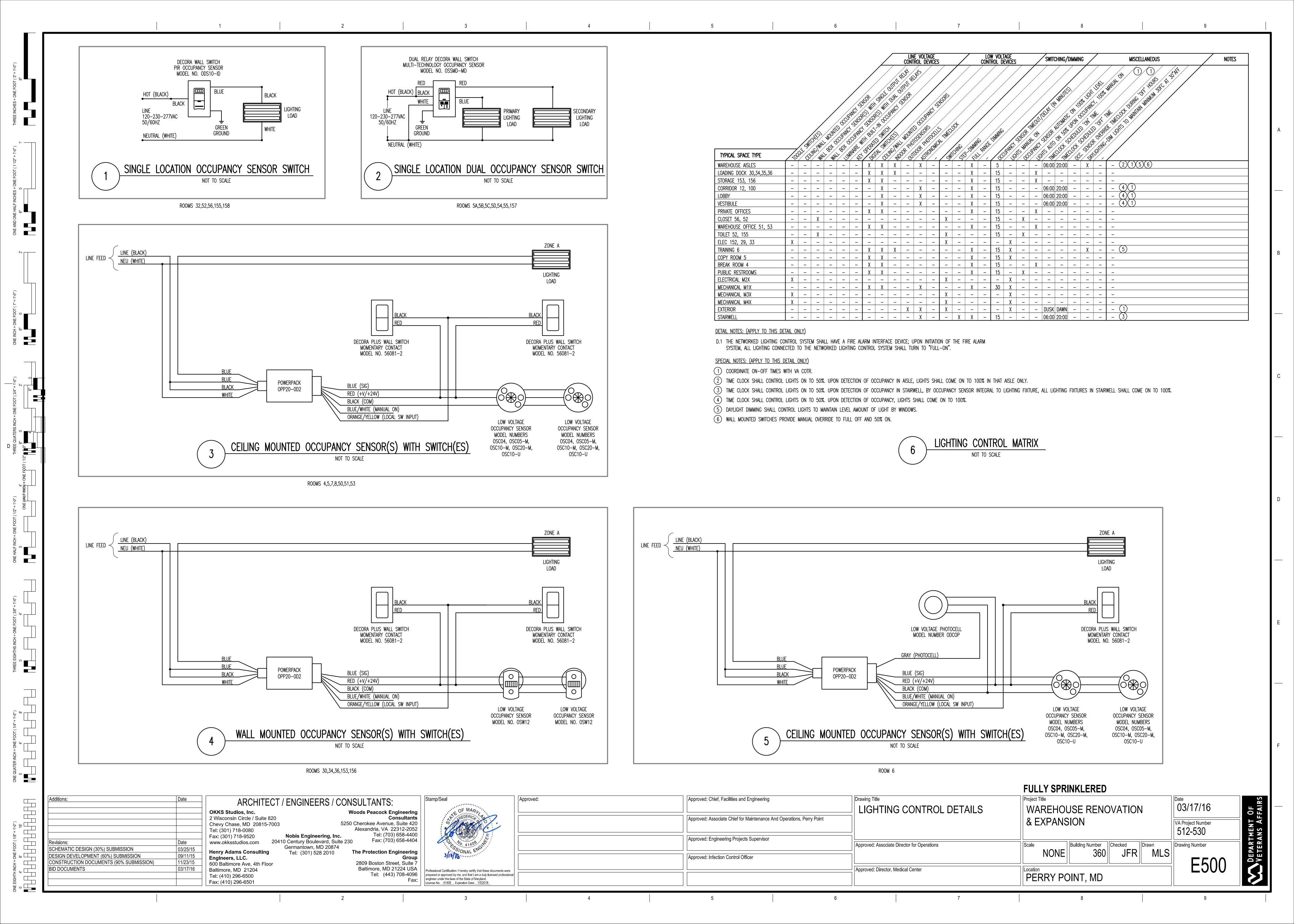
512-530

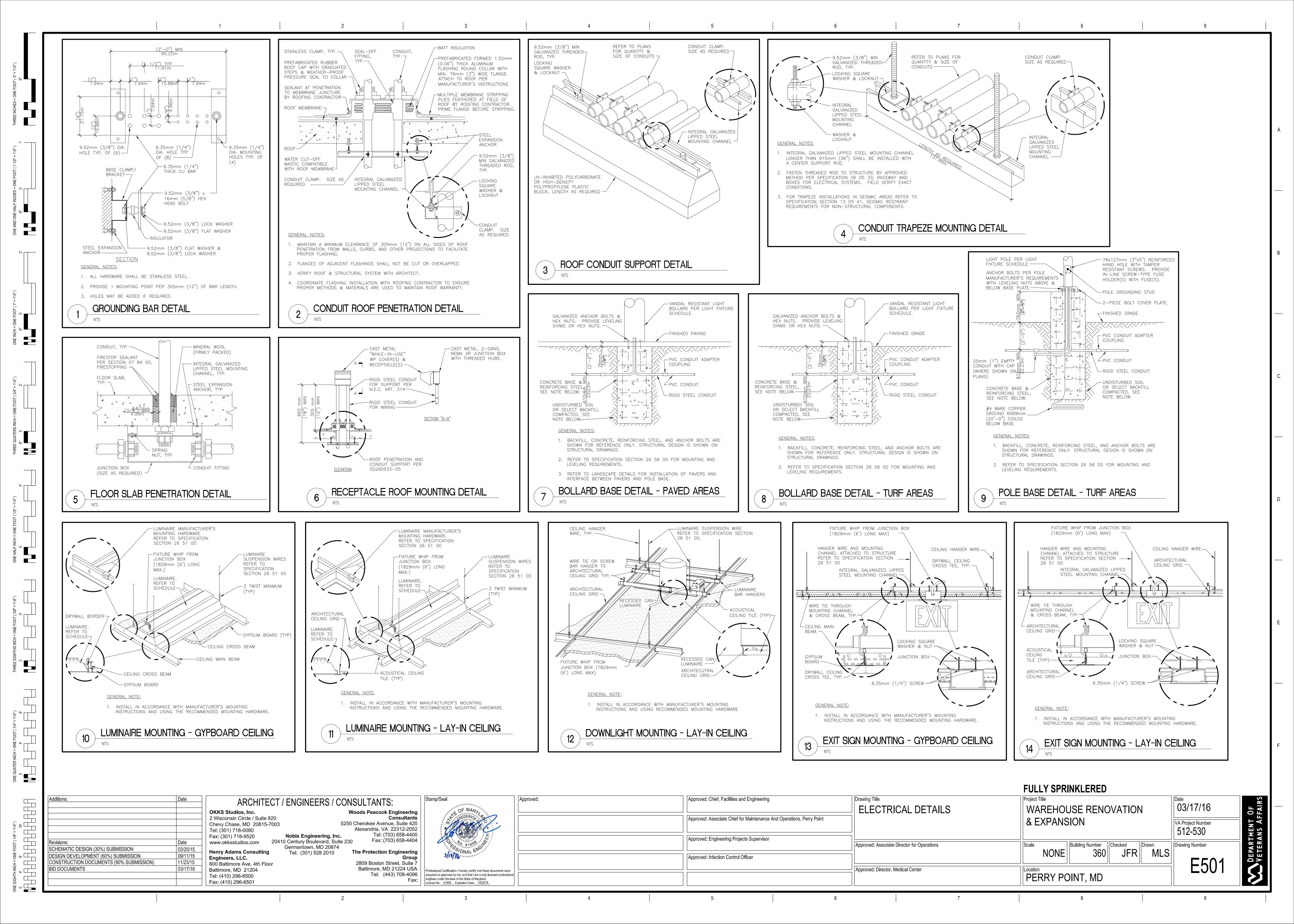
Drawing Number

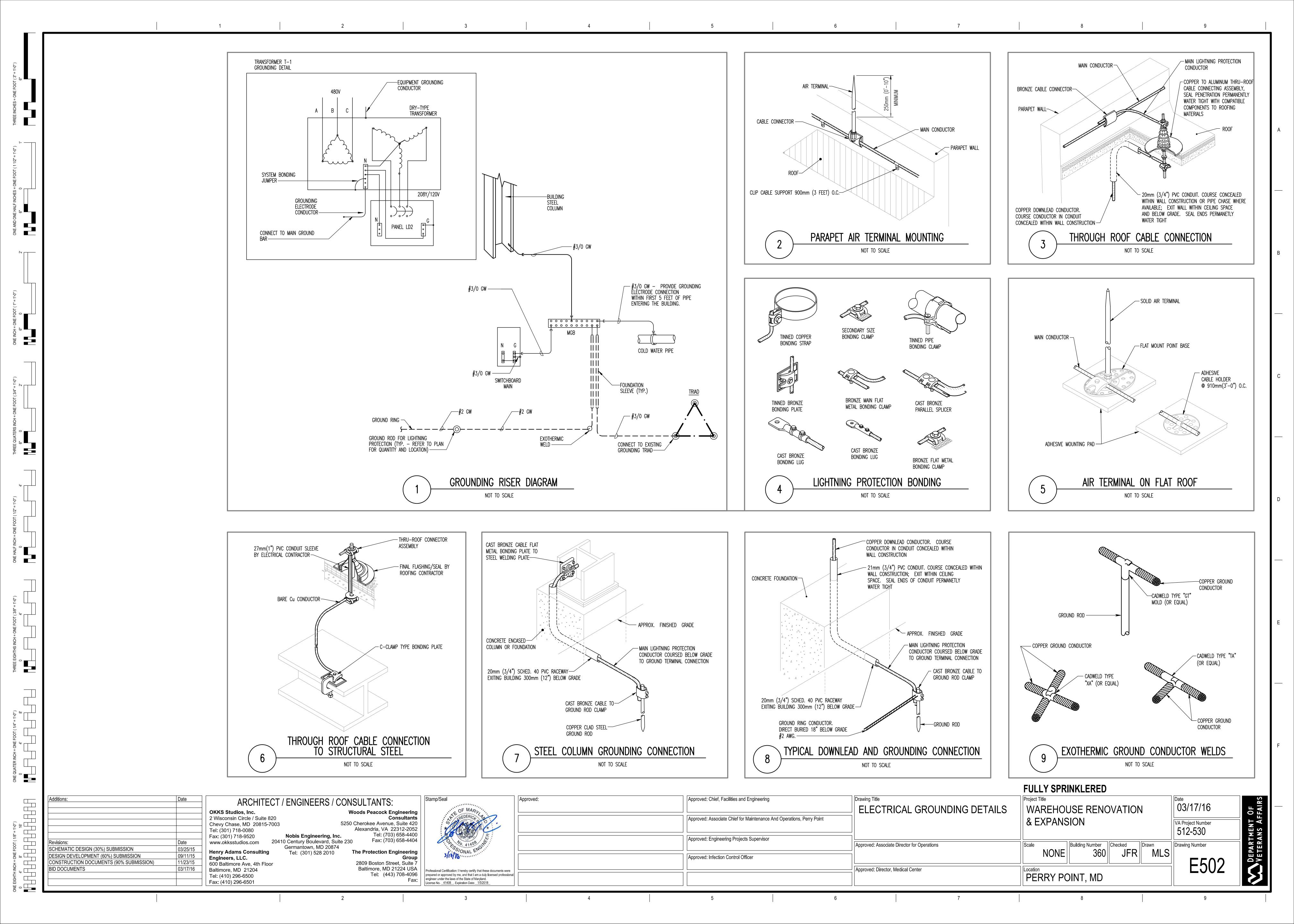
E400

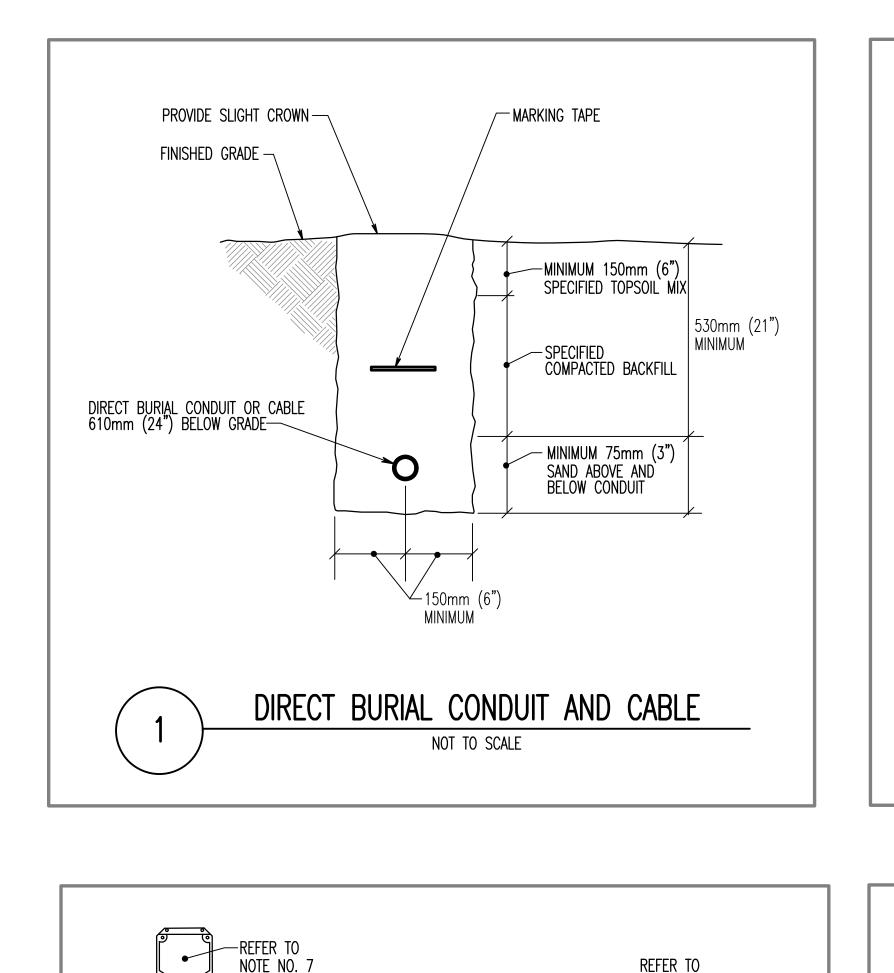
| Building Number | Checked | Drawn

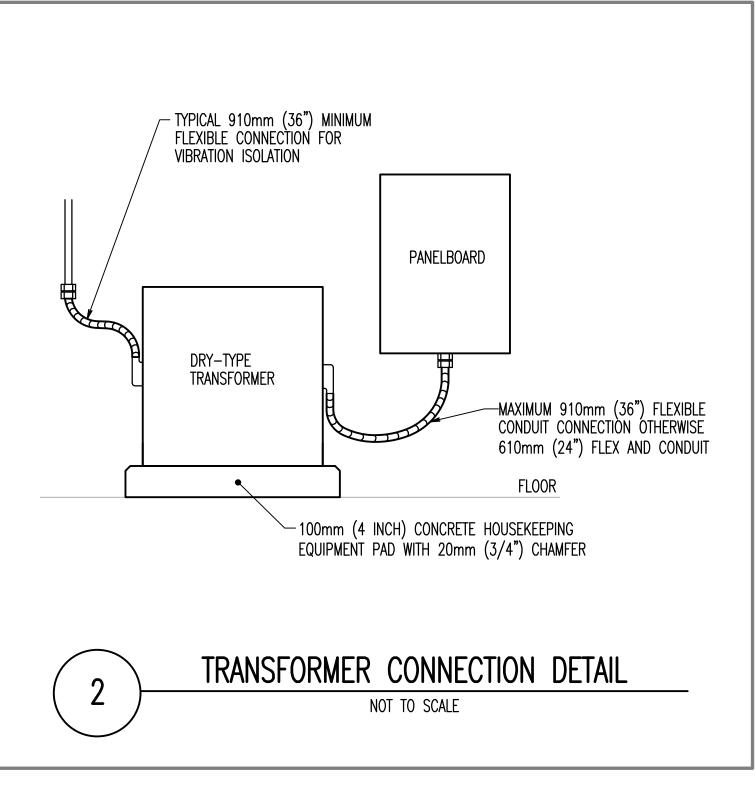
JFR | MLS |

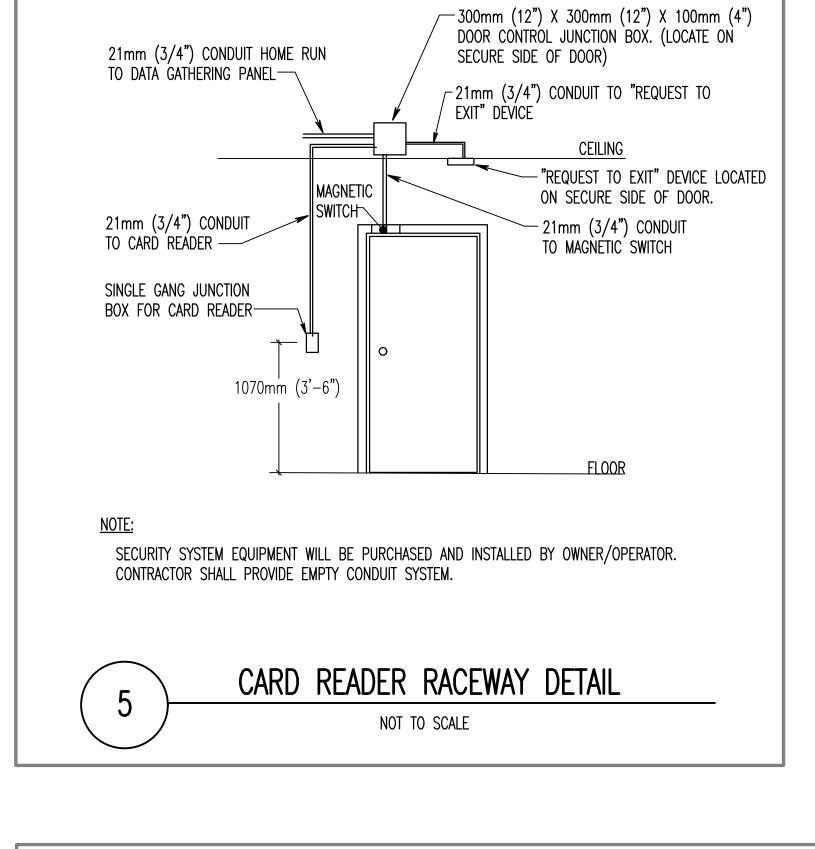


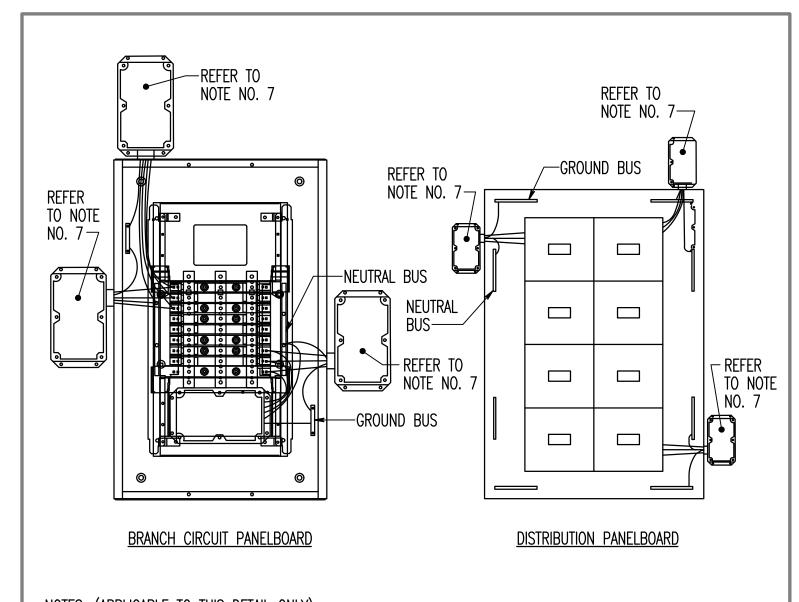










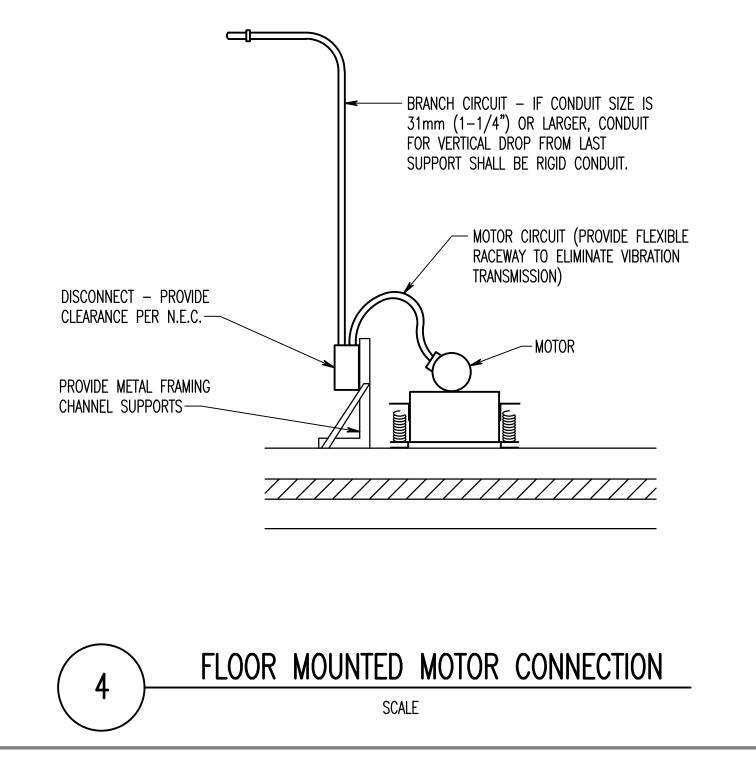


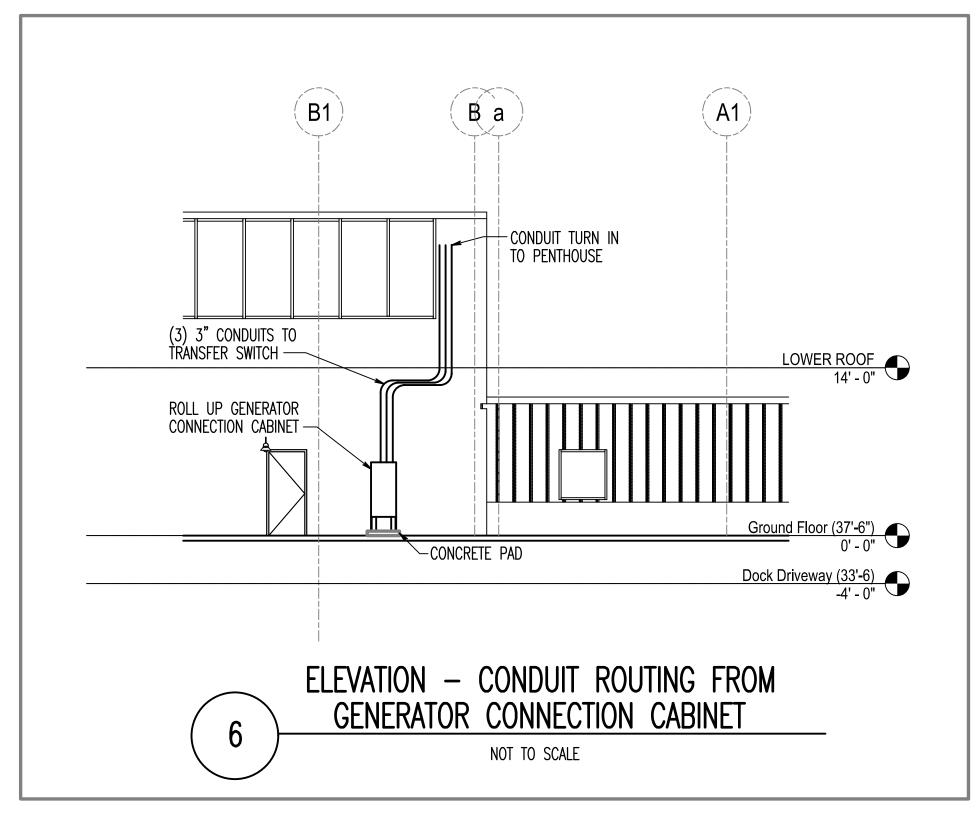


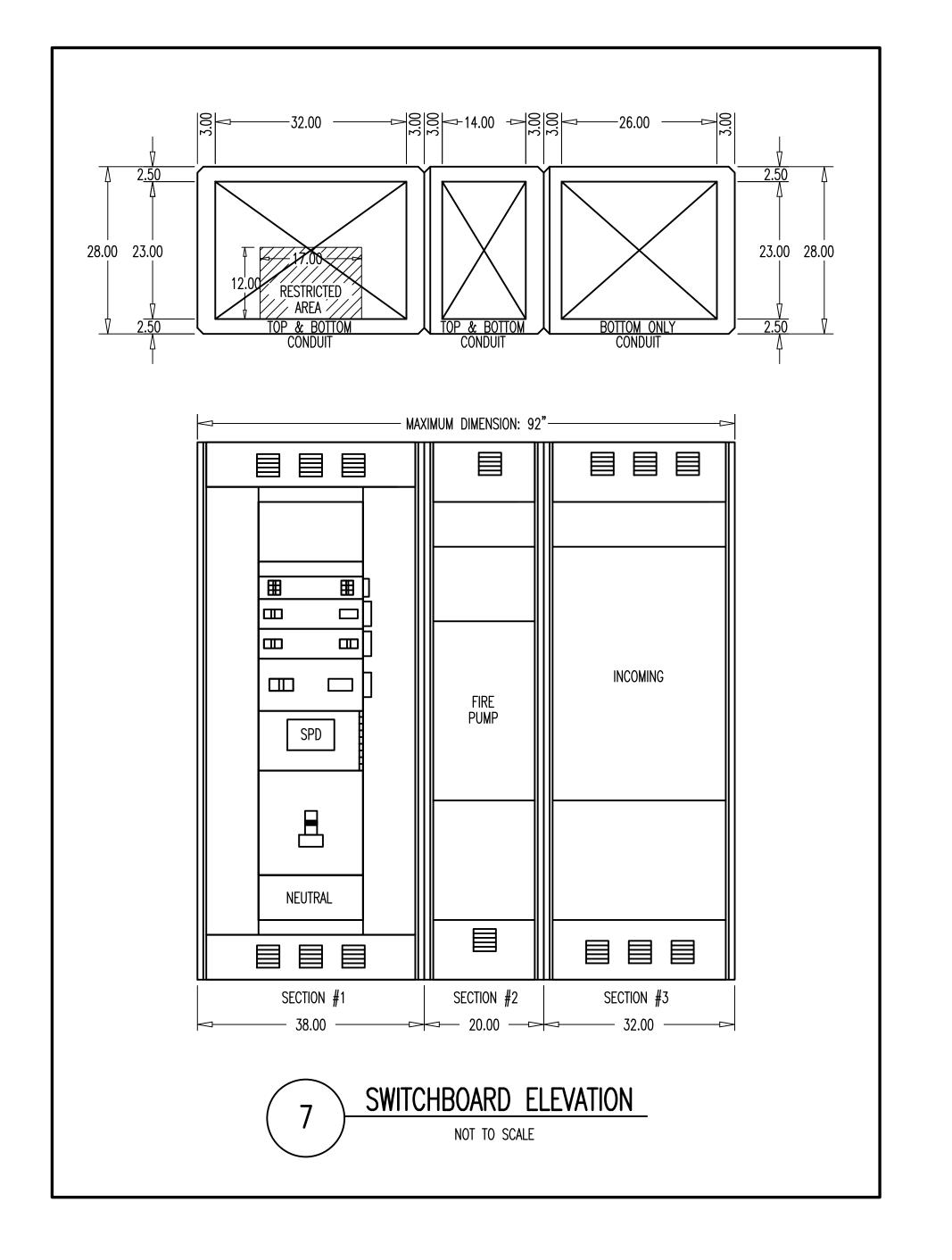
- 1. PROVIDE MULTIPOLE, 30 AMP DEDICATED CIRCUIT BREAKER TO SERVE AS DISCONNECT FOR SURGE PROTECTIVE DEVICE. COORDINATE WITH VOLTAGE CONFIGURATION OF PROTECTED EQUIPMENT.
- 2. FOR SERVICE ENTRANCE APPLICATIONS, INSTALL DEVICE ON LOAD SIDE OF SERVICE ENTRANCE AND BOND
- GROUND LEAD CONDUCTOR TO SERVICE ENTRANCE GROUND.
- 3. INSTALL CONDUCTORS BETWEEN SURGE PROTECTIVE DEVICE AND TERMINATION POINTS AS SHORT AND STRAIGHT AS POSSIBLE. DO NOT EXCEED MANUFACTURER'S RECOMMENDED CABLE LENGTH. DO NOT BOND NEUTRAL AND GROUND.
- 4. LOCATE SURGE PROTECTIVE DEVICE TO MINIMIZE CONDUCTOR LENGTHS BETWEEN SURGE PROTECTIVE DEVICE AND CIRCUIT BREAKER TO WHICH IT IS CONNECTED. ROUTE CONDUCTORS IN METAL CONDUIT USING RIGID NIPPLE. KEEP CONDUCTORS AS SHORT AND STRAIGHT AS POSSIBLE. WIRE SIZE FOR CONDCUTORS SHALL BE AS REQUIRED BY MANUFACTURER'S WRITTEN INSTALLATION INSTRUCTIONS: MINIMUM SIZE #10 AWG; MAXIMUM SIZE #4 AWG.
- 5. CONNECT SURGE PROTECTIVE DEVICE TO GROUNDING SYSTEM.
- 6. INSTALL CONDUCTORS FOR SURGE PROTECTIVE DEVICES NEATLY. BIND PHASE, NEUTRAL, AND GROUND CONDUCTORS TIGHTLY OVER ENTIRE LENGTH FROM SURGE PROTECTIVE DEVICE TO CIRCUIT BREAKER. USE THE SHORTEST LENGTH OF CONNECTING CABLE POSSIBLE.
- 7. INSTALL SURGE PROTECTIVE DEVICE ADJACENT TO PANELBOARD ON SIDE, TOP, OR BOTTOM OF ENCLOSURE.
- DO NOT INSTALL INSIDE PANELBOARD CABINET.

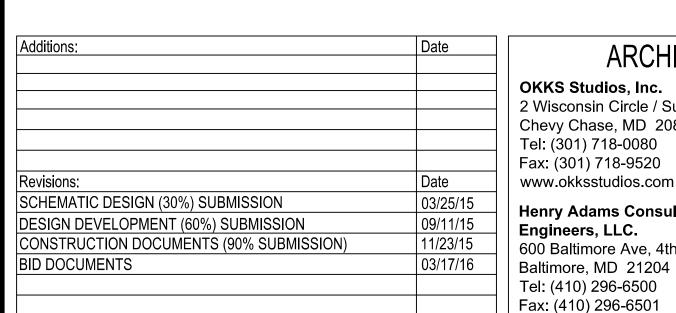
  8. REFER TO ONE—LINE DIAGRAM FOR PANELBOARDS THAT REQUIRE SURGE PROTECTIVE DEVICES.

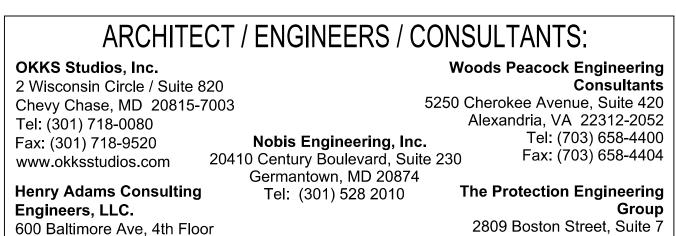


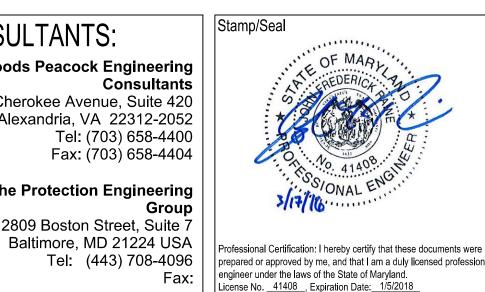






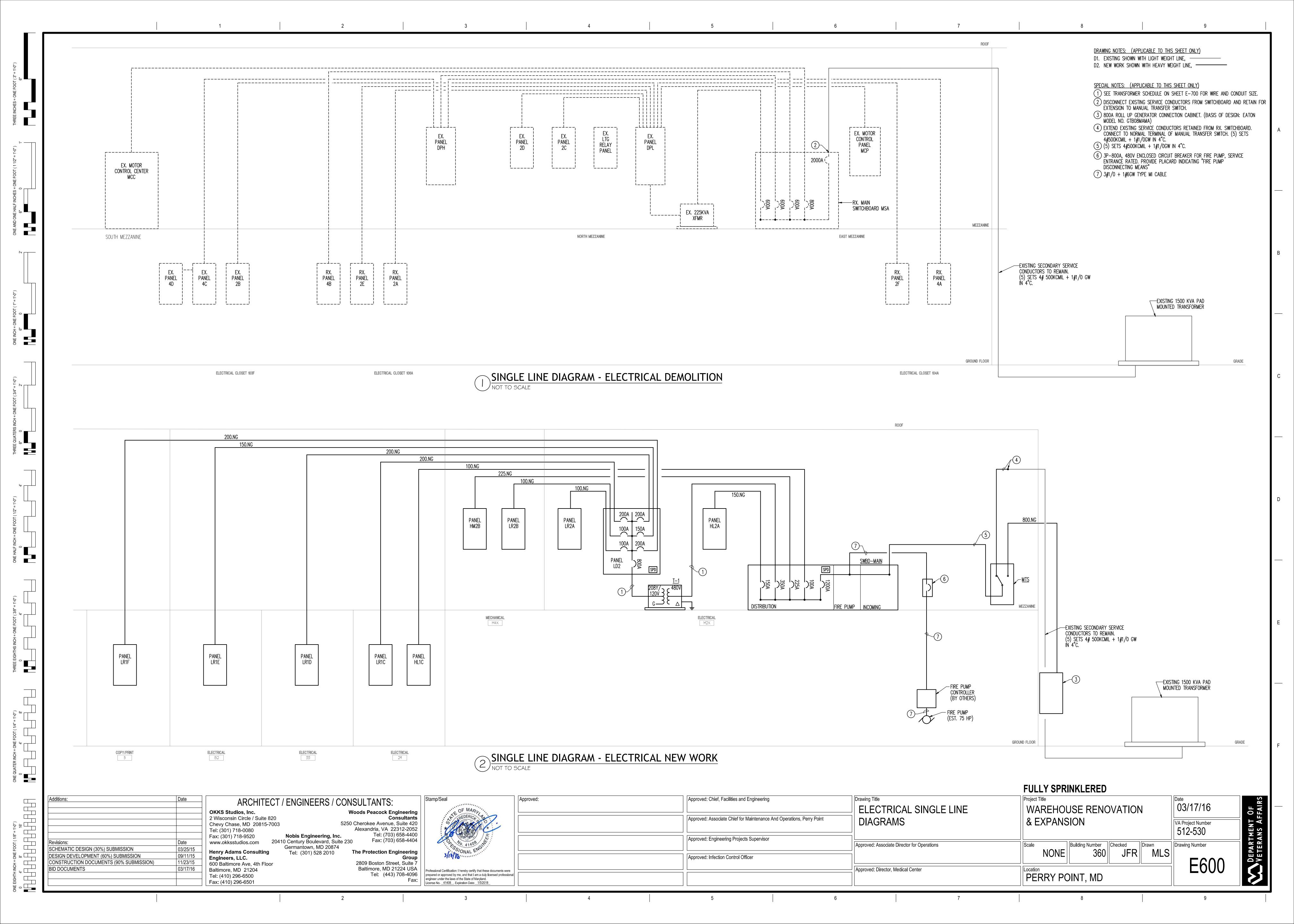


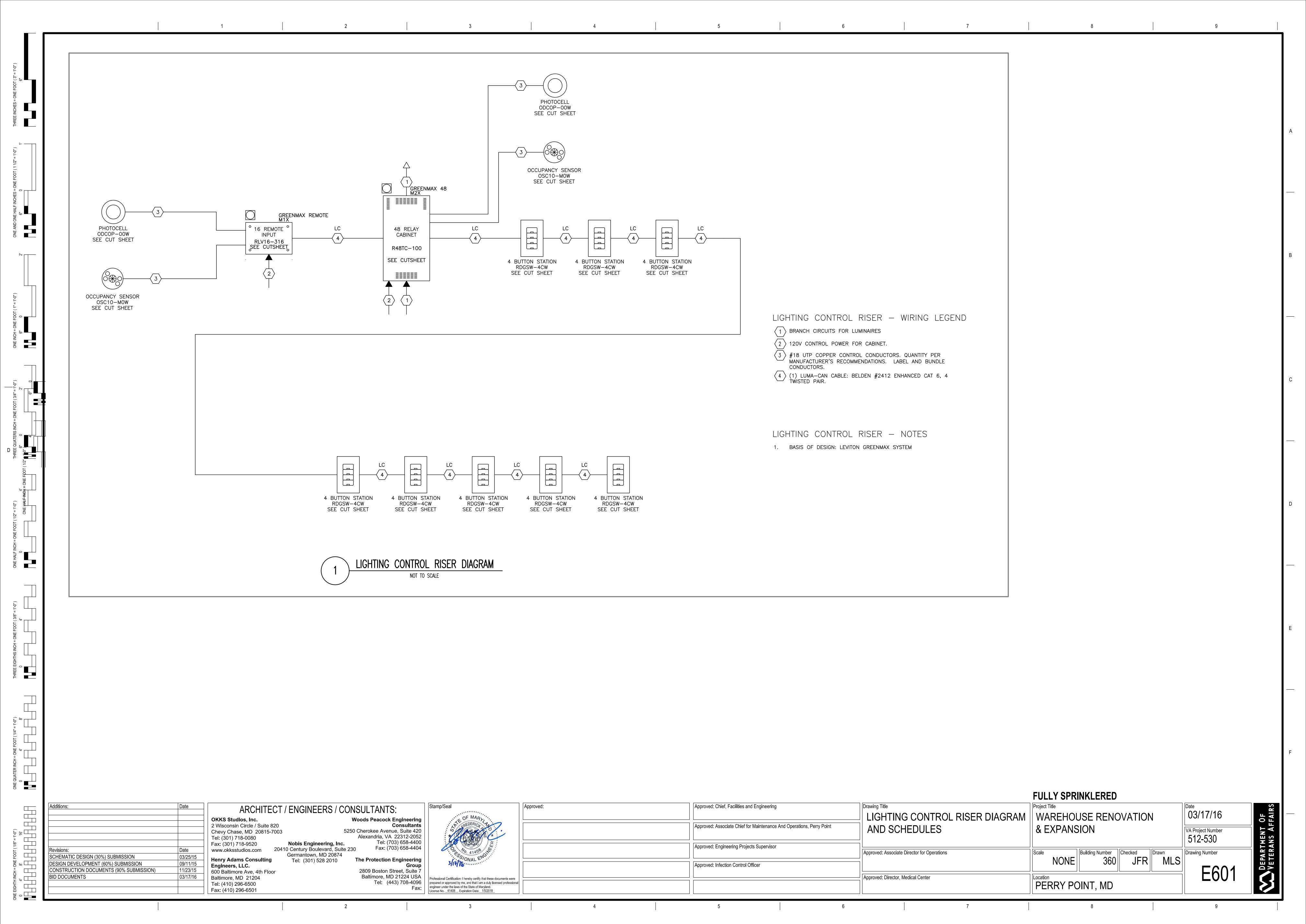




Approved:	Approved: Chief, Facilities and Engineering	Drawing 7
	Approved: Associate Chief for Maintenance And Operations, Perry Point	
	Approved: Engineering Projects Supervisor	Approved
	Approved: Infection Control Officer	
ere sional		Approved

	FULLY SPRINKLERED	
ECTRICAL DETAILS	WAREHOUSE RENOVATION Date 03/17/16	OF FFAIRS
	& EXPANSION VA Project Number 512-530	TMENT ANS AF
ed: Associate Director for Operations	Scale NONE Building Number Checked JFR MLS Drawing Number LF CO	DEPART VETER
ed: Director, Medical Center	Location PERRY POINT, MD	8





			LUMINAIRE SCHEDU	LE											
YPE MOUNTIN	IG LUMINAIRE DESCRIPTION	MANUFACTURER	CATALOG NUMBER	TYPE		LAMP CCT	QTY	WATTS/ LAMP	LUMENS/ LAMP	DRIVER/B TYPE	ALLAST	BALLAST FACTOR	SYSTEM VOLTAGE	INPUT WATTS	NOTES
A RECESSE	2'X4' LENSED TROFFER WITH A19 PATTERN LENS, FLUSH WHITE ALUMINUM DOOR	LITHONIA	2TL4-48L-FW-A19-SLD-LP835	L.E.D.	-	3500	1	40W	4800	0-10V DRIVER	1	-	MULTI	40W	_
A1 RECESSE	2'X4' LENSED TROFFER WITH A19 PATTERN LENS, FLUSH WHITE ALUMINUM DOOR, EMERGENCY BATTERY PACK	LITHONIA	2TL4-48L-FW-A19-SLD-LP835-EL14L	L.E.D.	-	3500	1	40W	4800	0-10V DRIVER	1	_	MULTI	40W	-
B RECESSE	2'X2' LENSED TROFFER WITH A19 PATTERN LENS, FLUSH WHITE ALUMINUM DOOR	LITHONIA	2TL4-33L-FW-A19-SLD-LP835	L.E.D.	-	3500	1	29W	3300	0-10V DRIVER	1	_	MULTI	29W	-
B1 RECESSE	2'X2' LENSED TROFFER WITH A19 PATTERN LENS, FLUSH WHITE ALUMINUM DOOR, EMERGENCY BATTERY PACK	LITHONIA	2TL4-33L-FW-A19-SLD-LP835-EL14L	L.E.D.	-	3500	1	29W	3300	0-10V DRIVER	1	-	MULTI	29W	_
C SUSPEND	8' HIGH BAY STRIP FIXTURE WITH NARROW AREA DISTRIBUTION, EXTRUDED 6063-T5 ALUMINUM HOUSING AND ACRYLIC LENS, TEXTURED DARK GRAY JOINER FINISH	LITHONIA	PTNSL8-ND-OSR-LP841	L.E.D.	83	4100	1	92W	7200	0-10V DRIVER	1	-	MULTI	92W	SEE NOTE
C1 SUSPEND	4' HIGH BAY STRIP FIXTURE WITH NARROW AREA DISTRIBUTION, EXTRUDED 6063—T5 ALUMINUM HOUSING AND ACRYLIC LENS, TEXTURED DARK GRAY JOINER FINISH, EMERGENCY BATTERY PACK	LITHONIA	PTNSL4-ND-OSR-LP841-I1207	L.E.D.	83	4100	1	47W	3600	0-10V DRIVER	1	_	MULTI	47W	SEE NOTE
D SUSPEND 108" AF	ED 4' ENCLOSED AND GASKETED INDUSTRIAL FIXTURE WITH CLEAR, DEEP FROSTED ACRYLIC LENS	LITHONIA	FEM4LED-4L-IMAFD	L.E.D.	65	4100	1	61W	4728	O-10V DRIVER	1	_	MULTI	61W	_
F RECESSE	2'X4' VOLUMETRIC FIXTURE WITH ACRYLIC LINEAR PRISMATIC DISFUSER	LITHONIA	2VTL4-48L-ADP-SLD-LP835	L.E.D.	82	3500	1	47W	4800	O-10V DRIVER	1	-	MULTI	47W	_
F1 RECESSE	2'X4' VOLUMETRIC FIXTURE WITH ACRYLIC LINEAR PRISMATIC DISFUSER, EMERGENCY BATTERY PACK	LITHONIA	2VTL4-48L-ADP-SLD-LP835-EL14L	L.E.D.	82	3500	1	47W	4800	0-10V DRIVER	1	_	MULTI	47W	_
G RECESSE	2'X2' VOLUMETRIC FIXTURE WITH ACRYLIC LINEAR PRISMATIC DISFUSER	LITHONIA	2VTL2-33L-ADP-SLD-LP835	L.E.D.	82	3500	1	34.5W	3300	0-10V DRIVER	1	_	MULTI	34.5W	_
H SUSPEND 96" AF	4' LENSED STRIP FIXTURE	LITHONIA	ZL1N-L48-5000LM-FST-MV0LT-35- 80CRI-WH	L.E.D.	80	3500	1	38W	5000	0-10V DRIVER	1	_	MULTI	38W	_
H1 SURFAC	E 4' LENSED STRIP FIXTURE, EMERGENCY BATTERY PACK	LITHONIA	ZL1N-L48-5000LM-FST-MV0LT-35- 80CRI-E7W-WH	L.E.D.	80	3500	1	38W	5000	0-10V DRIVER	1	-	MULTI	38W	_
K WALL SURFAC	4' LENSED STRIP FIXTURE WITH 0-10V DRIVER AND INTEGRAL OCCUPANCY SENSOR, EMERGENCY BATTERY PACK	LITHONIA	WL4-30L-EZ1-LP835-N100-NESPDT7	L.E.D.	80	3500	1	28.2W	3000	0-10V DRIVER	1	_	MULTI	28.2W	_
M WALL SURFAC	EXTERIOR WALL LUMINAIRE WITH DIE-CAST ALUMINUM HOUSING AND TEMPERED GLASS LENS, EMERGENCY BATTERY PACK, TEXTURED DARK BRONZE FINISH	LITHONIA	TWHLED-30C-1000-50K-T3M-277V- DMG-ELSW-DDBTXD	L.E.D.	65	5000	1	104W	6728	0-10V DRIVER	1	_	277V	104W	_
N GROUNI	8" ROUND, 42" TALL BOLLARD WITH EXTRUDED ALUMINUM SHAFT AND DIE—CAST ALUMINUM REFLECTOR AND TOP CAP, 3000K, ASYMMETRIC DISTRIBUTION, TEXTURED DARK BRONZE FINISH.	LITHONIA	DSXB LED-12C-530-30K-ASY- MVOLT-DMG-DDBTXD	L.E.D.	-	3000	1	22W	985	0-10V DRIVER	1	-	MULTI	22W	_
P WALL SURFAC	WET LOCATION THERMOPLASTIC EMERGENCY LIGHT WITH 2 HEADS, NICKEL—CADMIUM BATTERY AND SELF DIAGNOSTICS	LITHONIA	WLTU-LED	L.E.D.	_	-	2	1.9W	-	-	1	_	MULTI	2.7W	_
Q RECESSE	WET LOCATION 6" OPEN REFLECTOR DOWNLIGHT WITH CLEAR, SEMI—SPECULAR DIFFUSER	GOTHAM	EVO-35/30-6AR-MWD-LSS-MVOLT-EZ10	L.E.D.	_	3500	1	36.6W	3077	0-10V DRIVER	1	-	MULTI	36.6W	_
XIT SURFACE SUSPEND	DIE-CAST ALUMINUM EXIT SIGN WITH MATTE BLACK HOUSING AND BRUSHED ALUMINUM STENCIL FACE WITH GREEN LETTERING, ED NICKEL-CADMIUM BATTERY BACKUP AND SELF DIAGNOSTICS	LITHONIA	LE-S-G-ELN-SD	L.E.D.	-	ı	1	1.7W	-	0-10V DRIVER	1	_	MULTI	1.7W	_

1. LAMP TYPES ARE INDICATED BY INDUSTRY GENERIC DESIGNATIONS; SEE SPECIFICATIONS FOR APPROVED MANUFACTURERS.

2. CATALOG NUMBERS FOR LUMINAIRES INDICATE THE TYPE AND QUALITY OF THE LUMINAIRE TO BE PROVIDED BY THE CONTRACTOR AND ARE GENERAL IN NATURE. THE CATALOG NUMBERS ARE NOT INTENDED TO INDICATE AN ACTUAL ORDER MODEL NUMBER. IT IS THE CONTRACTOR'S RESPONSIBILITY TO PROVIDE LUMINAIRES WITH THE TYPE OF LAMP, BALLAST, LENS OR DIFFUSER, AND CONSTRUCTION FEATURES AS INDICATED IN THE SPECIFICATIONS.

3. WHERE A LUMINAIRE IS NOTED AS "NO EQUAL," SUBSTITUTIONS WILL NOT BE ACCEPTED. EQUIVALENT LUMINAIRES WILL BE ACCEPTED PROVIDED THEY ARE PROVEN TO BE EQUAL TO, OR BETTER THAN, THE SPECIFIED LUMINAIRE IN ALL RESPECTS. THIS SHALL INCLUDE, BUT NOT BE LIMITED TO, CONSTRUCTION FEATURES, APPEARANCE, AND PERFORMANCE. SUBMIT THE FOLLOWING FOR EACH PROPOSED SUBSTITUTION:

A. SAMPLE OF PROPOSED EQUIVALENT LUMINAIRE FOR TABLE—TOP EVALUATION. SAMPLE SHALL BE AN EXACT MATCH TO THE PROPOSED SUBSTITUTION INCLUDING ALL FEATURES, FINISHES, LAMPING, OPTIONS, ACCESSORIES, MOUNTING BRACKETS, ETC. SAMPLE SHALL INCLUDE 120V CORD AND NEMA 5-20P PLUG FOR OPERATIONAL TEST DURING TABLE—TOP EVALUATION.

B. POINT-BY-POINT LIGHT LEVEL CALCULATIONS IN 3-DIMENSIONAL LIGHTING CALCULATION SOFTWARE TO ILLUSTRATE GUARANTEED ILLUMINATION LEVELS. EACH SPACE AFFECTED BY A SUBSTITUTION SHALL BE MODELED AND CALCULATED USING INDUSTRY STANDARD VALUES FOR REFLECTANCES, LIGHT LOSS FACTOR, ETC. ENGINEER WILL COMPARE TO BASIS OF DESIGN LUMINAIRE AND ENGINEER'S CALCULATIONS TO APPROVE OR REJECT SUBSTITUTE LUMINAIRE. PROVIDE IES FILE TO ENGINEER FOR PROPOSED SUBSTITUTE ALONG WITH CALCULATION RESULTS.

C. POINT-BY-POINT COMPARATIVE DATA IN SIDE-BY-SIDE FORMAT COMPARING FEATURES OF SUBSTITUTE LUMINAIRE TO BASIS-OF-DESIGN LUMINAIRE.

D. ALL REQUIREMENTS OF DIVISION 1 SECTION "SUBSTITUTION PROCEDURES."

4. COORDINATE CONTROL COMPATABILITY BETWEEN BALLAST/DRIVER TYPES FOR ALL DIMMED LUMINAIRES WITH MANUFACTURER AND MODEL OF DIMMING CONTROL DEVICES.

5. PROVIDE EXIT SIGNS WITH SINGLE FACE OR DOUBLE FACE AND WITH OR WITHOUT CHEVRONS AS INDICATED ON THE DRAWINGS. PROVIDE RED OR GREEN LETTERING AS REQUIRED BY AHJ.

6. ALL MOUNTING HEIGHTS SHALL BE AS INDICATED ON THE DRAWINGS OR AS DIRECTED BY THE ARCHITECT OR ENGINEER. MOUNTING HEIGHTS OF WALL MOUNTED LUMINAIRES SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE CENTERLINE OF THE LUMINAIRE. MOUNTING HEIGHTS OF CEILING SUSPENDED LUMINAIRES SHALL BE MEASURED FROM THE FINISHED FLOOR TO THE BOTTOM OF THE LUMINAIRE.

7. IN WAREHOUSE, MOUNT FIXTURE 25' AFF. ABOVE AND BELOW PLATFORM, MOUNT FIXTURES 12' AFF.

## MANUAL TRANSFER SWITCH SCHEDULE DESIGNATION AMPACITY PHASE WIRES SWITCHED LOAD BYPASS PRIORITY TRANSITION VOLTAGE MOUNTING AIC RATING REMARKS MTS-1 | 2000A | 3 | 4 | 3 | NO | NO | N/A | OPEN | 480V | FLOOR | 50KAIC \_

	DRY-TYPE TRANSFORMER SCHEDULE														
TRANSFORMER SIZE DESIGNATION (KVA)		DATING	TING PRIMARY	PRIMARY CIRCUIT			PR	PRIMARY CB SECOND		SECONDARY CIRCUIT			SECC	ONDARY CB	NOTEC
DESIGNATION	(KVA)	RAIING	VOLTAGE	NUMBER	SIZE (PH&N,GW)	CONDUIT	POLE	TRIP AMPS	VOLTAGE	NUMBER	SIZE (PH&N,GW)	CONDUIT	POLE	TRIP AMPS	NOTES
T1	225	-	480V-3PH	3+GW	500KCMIL+#3	3-1/2"	3	350A	208Y/120V-3PH	12+3GW	300KCMIL+#2/0	(3) 3"	3	800A	FLOOR MOUNTED

	N	<b>MECH</b>	ANICA	L EC	UIPMENT I	ELECT	RICAL CONNECTION	SCHEDULE	
EQUIPMENT DESIGNATION	KW	HP	MCA	FLA	VOLTAGE-PHASE	LOAD (KVA)	WIRING	DISCONNECTING MEANS	NOTES
360-AH1	_	7.5	14.88	11.9	480V-3PH	9.89	3#10+#10GW IN 3/4°C	EXISTING VSD-1	_
360-AH2	_	15	28.75	23.0	480V-3PH	19.11	3#4+#10GW IN 1-1/4°C	EXISTING VSD-2	_
360-AH3	_	1.5	4.12	3.3	480V-3PH	2.74	3#12+#12GW IN 3/4°C	EXISTING VSD-3	_
360-AH4 (SF4)	_	15	_	21.0	480V-3PH	17.5	3#10+#10GW IN 3/4°C	FACTORY INSTALLED VSD-4	_
360-AH5 (SF5)	_	10	_	14.0	480V-3PH	11.7	3#12+#12GW IN 3/4°C	FACTORY INSTALLED VSD-5	_
360-AH6 (SF6)	_	7.5	_	11.0	480V-3PH	9.15	3#12+#12GW IN 3/4°C	VSD-6/DS-AH6	_
360-AH7 (SF7)	_	2	_	3.4	480V-3PH	2.83	3#12+#12GW IN 3/4°C	FACTORY INSTALLED VSD-7	_
UH-1	_	-	-	-	120V-1PH	0.60	2#12+#12GW IN 3/4°C	FACTORY INSTALLED DISCONNECT	_
360-EF6	_	1/4	-	5.8	120V-1PH	0.70	2#12+#12GW IN 3/4°C	MANUAL MOTOR STARTER SWITCH	_
360-RF4	_	5	_	7.6	480V-3PH	6.32	3#12+#12GW IN 3/4°C	VSD-RF4	_
360-RF5	_	3	_	4.8	480V-3PH	4	3#12+#12GW IN 3/4°C	VSD-RF-5	_
360-RF7	_	0.75	-	1.6	480V-3PH	1.2	3#12+#12GW IN 3/4°C	VSD-RF-6	_
360-P-HHW	_	(2) 3	_	4.8	480V-3PH	4.00	3#12+#12GW IN 3/4°C	DS-P-HHW/INT. CONTROL PANEL	_
360-P-HWR	_	1/4	-	5.8	120V-1PH	0.70	2#12+#12GW IN 3/4°C	HOA MAN. MOTOR STARTER SW.	_
360-PHP-4	0.218	_	_	5.0	120V-1PH	0.218	2#12+#12GW IN 3/4°C	HOA MAN. MOTOR STARTER SW.	_
360-PHP-5	0.218	_	_	5.0	120V-1PH	0.218	2#12+#12GW IN 3/4°C	HOA MAN. MOTOR STARTER SW.	_
360-PHP-6	0.117	_	_	5.0	120V-1PH	0.117	2#12+#12GW IN 3/4°C	HOA MAN. MOTOR STARTER SW.	-
360-PHP-7	0.117	_	_	5.0	120V-1PH	0.117	2#12+#12GW IN 3/4°C	HOA MAN. MOTOR STARTER SW.	_
DOCK LIFT	_	5	_	15.2	208V-3PH	5.5	3#12+#12GW IN 3/4°C	CMS-DOCK LIFT	_
EXISTING HEAT PUMP 13	_	_	34.00	_	208V-1PH	7.07	2#4+#10GW IN 1"C	EXISTING DISCONNECT	_
FAN CF-6	_	0.375	_	3.6	120V-1PH	0.43	2#12+1#12GW IN 3/4°C.	MANUAL MOTOR STARTER SWITCH	_
360-P-CHW	_	(2) 5	_	7.6	480V-3PH	6.32	3#12+#12GW IN 3/4°C	VSD-P-CHW	-
FIRE PUMP	_	75	-	96	480V-3PH	79.9	REFER TO RISER	FIRE PUMP CONTROLLER	-
JOCKEY PUMP	_	1.5	_	3.0	480V-3PH	2.2	3#12+#12GW IN 3/4"C	JOCKEY PUMP CONTROLLER	_

	FEEDER SCHEDULE												
FEEDER TAG	NOMINAL	NUMBER	PHASE (A-B-C) CONDUCTOR	NEUTRAL CONDUCTOR	GROUND C	CONDUCTOR	CONDUIT SIZE						
DESIGNATION	AMPERE RATING	OF SETS	COPPER SIZE AWG/KCMIL	COPPER SIZE AWG/KCMIL	QUANTITY OF CONDUCTORS	COPPER SIZE AWG/KCMIL	(3P+G)	(3P+N+G)	(3P+2N+G) OR (3P+N+2G)				
100.X	100	1	1	1	1	8	1-1/2"	2"	2"				
150.X	150	1	1/0	1/0	1	6	2"	2"	2"				
200.X	200	1	3/0	3/0	1	6	2"	2-1/2"	2-1/2"				
225.X	225	1	4/0	4/0	1	4	2-1/2"	2-1/2"	3"				
350.X	350	1	500	500	1	3	3-1/2"	3-1/2"	3–1/2"				
800.X	800	3	300	300	1	1/0	3"	3"	3–1/2"				
2000.X	2000	6	400	400	1	250	3"	3–1/2"	3–1/2"				

Drawing Title

ELECTRICAL SCHEDULES

Approved: Associate Director for Operations

Approved: Director, Medical Center

DESIGNATIONS (WHERE .X EQUALS G, NG, NNG, NGG)

ONE SET OF (3)#4 IN 1-1/4" CONDUIT

ONE SET OF (3)#4 & #10GW IN 1-1/4" CONDUIT

ONE SET OF (4)#4 & #10GW IN 1-1/4" CONDUIT

ONE SET OF (4)#4 & #10GW IN 1-1/4" CONDUIT

ONE SET OF (5)#4 & #10GW IN 1-1/4" CONDUIT (DOUBLE NEUTRAL)

ONE SET OF (4)#4 & (2)#10GW IN 1-1/4" CONDUIT (GROUND WIRE PLUS ISOLATED GROUND WIRE)

TIME CLOCK

		HEDULE (1) NEL FOR SWITCHEI				: RM M2X — ELECTRICAL MEZ DESIGN: LEVITON GREENMAX	ZZANINE REMOTE M1X SURFACE MOUNT	TED PANEL WITH KNOCK	KOUTS, NEMA 1 ENCLO	DSURE, WITH DIGITAL
RELAY NO.	RELAY TYPE	PANELBOARD CKT	VOLTAGE	LUMINAIRE TYPE	LOCATION	CONTROL CHANNEL	CONTROL TYPE		LOCATION OF MANUAL CONTROL	NO

RELAY	RELAY TYPE	PANELBOARD CKT	VOLTAGE	LUMINAIRE TYPE	LOCATION	CONTROL CHANNEL	CONTROL TYPE	LOCATION OF MANUAL CONTROL	NOTES
1	SINGLE POLE, N.C.	3(HL1A)	277V	B, B1	RM 100 - CORRIDOR, RM 50 - VESTIBULE	1	OCCUPANCY SENSOR, TIME CLOCK, SWITCH	ENTRANCE DOOR 50.1	
2	SINGLE POLE, DIMMING	3(HL1A)	277V	F, F1, G	RM 51 - WAREHOUSE LOBBY, RM 53 - WAREHOUSE OFFICE	2	OCCUPANCY SENSOR, DIMMER SWITCH	DOORS 51, 53.1, 53.2	
3	SINGLE POLE, N.C.	3(HL1A)	277V	D	RM 30 - LOADING DOCK	3	OCCUPANCY SENSOR, SWITCH	DOOR 30F	
4	SINGLE POLE, N.C.	3(HL1A)	277V	K	STAIR 31	4	OCCUPANCY SENSOR	-	
5	SINGLE POLE, N.C.	3(HL1A)	277V	D	RM 34 - DOCK TREATMENT	5	OCCUPANCY SENSOR, SWITCH	DOOR 34.2	
6	SINGLE POLE, N.C.	5(HL1A)	277V	D	RM 36A - RECEIVING DOCK (DIRTY)	6	OCCUPANCY SENSOR, SWITCH	DOOR 36A.1	
7	SINGLE POLE, N.C.	5(HL1A)	277V	D	RM 36B - RECEIVING DOCK (CLEAN)	7	OCCUPANCY SENSOR, SWITCH	DOOR 36B.3	-
8	SINGLE POLE, N.C.	5(HL1A)	277V	K	STAIR 37, STAIR 38	4	OCCUPANCY SENSOR	-	-
9	SINGLE POLE, DIMMING	5(HL1A)	277V	F, F1	RM 153 - HIGH DENSITY STORAGE, RM 156 - WORK AREA	8	OCCUPANCY SENSOR, DIMMER SWITCH	ENTRANCE TO RM 153 AND 156	

## SPECIAL NOTES: (APPLY TO THIS DRAWING ONLY)

(1) TIMECLOCK CONTROL SHALL BE THE PRIORITY CONTROL. IF THE OUTDOOR LIGHT LEVEL DROPS BELOW AN ACCEPTABLE LEVEL, THE PHOTOSENSOR SHALL TURN THE LIGHTS 'ON' EARLIER THEN SCHEDULED IN THE AFTERNOON/EVENING. IF THE LIGHT LEVEL IS NOT ADEQUATE IN THE MORNING WHEN THE LIGHTS ARE SCHEDULED TO TURN 'OFF', THE PHÓTOSENSOR SHALL CONTROL

Fax: (410) 296-6501

Additions:	Date	ARCHITECT
		OKKS Studios, Inc. 2 Wisconsin Circle / Suite 820 Chevy Chase, MD 20815-700 Tel: (301) 718-0080 Fax: (301) 718-9520
Revisions:	Date	www.okksstudios.com 20
SCHEMATIC DESIGN (30%) SUBMISSION	03/25/15	Henry Adams Consulting
DESIGN DEVELOPMENT (60%) SUBMISSION	09/11/15	Engineers, LLC.
CONSTRUCTION DOCUMENTS (90% SUBMISSION)	11/23/15	600 Baltimore Ave, 4th Floor
BID DOCUMENTS	03/17/16	Baltimore, MD 21204 Tel: (410) 296-6500

THE LIGHTS TO REMAIN 'ON' UNTIL THE LIGHT LEVEL IS ADEQUATE.

ARCHITECT / ENGINEERS / CONSULTANTS: Woods Peacock Engineering Consultants OKKS Studios, Inc. Wisconsin Circle / Suite 820 Chevy Chase, MD 20815-7003 5250 Cherokee Avenue, Suite 420 Alexandria, VA 22312-2052 Tel: (301) 718-0080 Tel: (703) 658-4400 Fax: (301) 718-9520 Nobis Engineering, Inc. Fax: (703) 658-4404 20410 Century Boulevard, Suite 230 vww.okksstudios.com Germantown, MD 20874

Tel: (301) 528 2010

The Protection Engineering Group 2809 Boston Street, Suite 7 Baltimore, MD 21224 USA fessional Certification: I hereby certify that these documents were Tel: (443) 708-4096 prepared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. Fax:

icense No. 41408 , Expiration Date: 1/5/2018

Stamp/Seal

Approved:	Approved: Chief, Facilities and Engineering
	Approved: Associate Chief for Maintenance And Operations, Perry Point
	Approved: Engineering Projects Supervisor
	Approved: Infection Control Officer

15A-1P	2#12 + #12GW IN 3/4"C
20A-1P	2#12 + #12GW IN 3/4°C
25A-1P	2#10 + #10GW IN 3/4°C
30A-1P	2#10 + #10GW IN 3/4"C
35A-1P	2#8 + #10GW IN 3/4°C
40A-1P	2#8 + #10GW IN 3/4"C
45A-1P	2#6 + #10GW IN 3/4"C
50A-1P	2#6 + #10GW IN 3/4"C
60A-1P	2#4 + #10GW IN 1"C
	208 VOLT, 1PH, 2W CIRCUITS
CIRCUIT BREAKER	CONDUCTOR & CONDUIT SIZE
15A-2P	2#12 + #12GW IN 3/4"C
20A-2P	2#12 + #12GW IN 3/4"C
25A-2P	2#10 + #10GW IN 3/4"C
30A-2P	2#10 + #10GW IN 3/4"C
35A-2P	2#8 + #10GW IN 3/4"C
40A-2P	2#8 + #10GW IN 3/4"C
45A-2P	2#6 + #10GW IN 3/4"C
50A-2P	2#6 + #10GW IN 3/4"C
60A-2P	2#4 + #10GW IN 1"C
	208 OR 480 VOLT, 3PH, 3W CIRCUITS
CIRCUIT BREAKER	CONDUCTOR & CONDUIT SIZE
15A-3P	3#12 + #12GW IN 3/4"C
20A-3P	3#12 + #12GW IN 3/4"C
25A-3P	3#10 + #10GW IN 3/4"C
30A-3P	3#10 + #10GW IN 3/4"C
35A-3P	3#8 + #10GW IN 3/4"C
40A-3P	3#8 + #10GW IN 3/4"C
45A-3P	3#6 + #10GW IN 1"C
50A-3P	3#6 + #10GW IN 1"C
60A-3P	3#4 + #10GW IN 1-1/4°C
	120/208 & 277/480 VOLT, 3PH, 4W CIRCUITS
CIRCUIT BREAKER	CONDUCTOR & CONDUIT SIZE
15A-3P	4#12 + #12GW IN 3/4"C
20A-3P	4#12 + #12GW IN 3/4"C
25A-3P	4#10 + #10GW IN 3/4"C
30A-3P	4#10 + #10GW IN 3/4"C
35A-3P	4#8 + #10GW IN 3/4"C
40A-3P	4#8 + #10GW IN 3/4"C
45A-3P	4#6 + #10GW IN 1"C
50A-3P	4#6 + #10GW IN 1"C
60A-3P	4#4 + #10GW IN 1-1/4°C
1 THIS SCHEDULE IS I	IONS FOR USING THIS SCHEDULE: INTENDED TO PROVIDE BRANCH CIRCUIT CONDUIT AND WIRE SIZE IF CALLED OUT IN PANELBOARD SCHEDULE, SHEET KEYNOTE, OR TATION CONVENTIONS SHOWN ON THE ELECTRICAL LEGEND SHEET.
<ol> <li>HOW TO USE: SELECT SYSTEM VOLTAGE, P SIZE.</li> </ol>	CT BRANCH CIRCUIT CONDUIT AND WIRE SIZE BY FIRST DETERMINING OLE AND WIRE CONFIGURATION AND SECOND BY CIRCUIT BREAKER
SYSTEM VOLTAGE, P SIZE.  3. CONTRACTOR SHALL FOR MAXIMUM VOLTA	CI BRANCH CIRCUIT CONDUIT AND WIRE SIZE BY FIRST DETERMINING OLE AND WIRE CONFIGURATION AND SECOND BY CIRCUIT BREAKER  INCREASE WIRE AND CONDUIT SIZE AS REQUIRED BY SPECIFICATIONS AGE DROP OF 3% FROM BRANCH CIRCUIT PANEL TO LAST DEVICE OF ACTUAL CONDUIT ROUTE.

BRANCH CIRCUIT SCHEDULE

120 OR 277 VOLT, 1PH, 2W CIRCUITS

CIRCUIT BREAKER

CONDUCTOR & CONDUIT SIZE

	DISCONNECT SWITCH SCHEDULE												
DESIGNATION	AMPS	POLES	VOLTS	FUSE AMPS	FUSE TYPE (CLASS)	NEMA ENCLOSURE	NOTES						
DS-AH6	30	3	600	N/A	RK5	3R	2,3						
DS-P-HHW	30	3	600	10	RK5	1	1,2						

4. COMPLETE CIRCUITING OF INDIVIDUAL ELECTRICAL DEVICES TO HOMERUN USING WIRE AND RACEWAY SIZES INDICATED ON SCHEDULE.

5. CONDUIT SIZES SHOWN ABOVE ARE THE MINIMUM SIZE TO BE USED. CONDUITS WITH CONDUCTORS FOR MULTIPLE BRANCH CIRCUIT RUNS SHALL CONFORM TO BOTH THE ABOVE MINIMUM SIZE LISTED AND TO CONDUIT FILL REQUIREMENTS OF ANNEX C OF THE NEC.

NOTES: (APPLICABLE TO DISCONNECT SWITCH SCHEDULE ONLY)

PERRY POINT, MD

1. ELECTRICAL CONTRACTOR SHALL PROVIDE FUSE AND COORDINATE EXACT EQUIPMENT FUSE SIZE DURING CONSTRUCTION

WITH MOTOR OR EQUIPMENT NAMEPLATE DATA.

2. ALL DISCONNECTS SHALL BE HEAVY DUTY TYPE WITH GROUND LUG AND CLASS RK FUSE REJECTION KIT.

3. DISCONNECT TO BE INTERLOCKED WITH VSD-6 SO THAT VSD-6 MAY NOT BE STARTED WHILE DS-AH6 IS OPEN. PROVIDE SIGN ON DS-AH6 STATING "MOTOR CONTROLLED BY VSD-6 IN MECH ROOM M3X"

E SIGN ON DS-AND STATING MOTOR CONTROLLED BY VSD-0	IN MECH ROOM MOX.
Project Title WAREHOUSE RENOVATION	Date 03/17/16
& EXPANSION	VA Project Number 512-530
NONE Building Number Checked JFR	Drawing Number
Location	

r OF FFAIRS

5 | 5 | { } 5 LIGHTING - SOUTHEAST SPARE LIGHTING - SOUTH WAREHOUSE 7 360-AH4 7 | 360-AH-2 6.37 7 EXTERIOR LIGHTING LIGHTING - SOUTH WAREHOUSE 6.37 LIGHTING - ROOMS M2X, M3X 9 9 SPARE 1 11 { } LIGHTING - NORTH WAREHOUSE 3 | 13 | 360 – AH5 - |3| 25 | 360-P-HHW 13 | 13 | SPARE - |1| 20 | 14 14 3|13|360-AH-6 3.10 LIGHTING - NORTH WAREHOUSE 15 15 SPARE LIGHTING - NORTH WAREHOUSE 3.10 | 2.63 LIGHTING - NORTH WAREHOUSE 360-RF-7 | 19 | 19 | SPARE - |1| 20 | 19|19|360-P-CHW - |3| 15 | 19|19|360-RF4 2.10 LIGHTING - NORTH WAREHOUSE 2.10 2.83 LIGHTING - NORTHEAST ROOMS 23 | 23 | SPARE 2.10 EXTERIOR LIGHTING - |1| 20 | 25 25 SPARE 25 25 SPARE 26 26 25|25|JOCKEY PUMP 0.70 27 | 27 | SPARE 29|29|SPARE 29 29 SPARE - |1| 20 | 31 31 SPARE 31 31 SPARE 34 3 33 | 33 | SPARE 3|33|SPARE SPARE 36 36 35 | 35 | SPARE 35 | 35 | SPARE SPARE 35 35 SPARE 7|37|SPACE WITH PROVISIONS SPACE WITH PROVISIONS 7|37|SPACE WITH PROVISIONS SPACE WITH PROVISIONS 37 37 SPACE WITH PROVISIONS SPACE WITH PROVISIONS 39|39|SPACE WITH PROVISIONS SPACE WITH PROVISIONS 39 39 SPACE WITH PROVISIONS SPACE WITH PROVISIONS 39|39|SPACE WITH PROVISIONS SPACE WITH PROVISIONS ||41|SPACE WITH PROVISIONS SPACE WITH PROVISIONS 1 41 SPACE WITH PROVISIONS - | SPACE WITH PROVISIONS 41|41|SPACE WITH PROVISIONS - |1| - | SPACE WITH PROVISIONS 14.86 | 6.75 | 14.86 | 9.66 | 14.86 | 7.29 13.45 | 4.93 | 13.45 | 4.29 | 13.45 | 4.29 2.46 | - | 2.26 | - | 1.75 | -**AUXILIARIES: AUXILIARIES:** ✓ GROUND BUS **AUXILIARIES:** ☑ GROUND BUS CONNECTED LOAD: 53.86KVA CONNECTED LOAD: 6.47KVA 18.38 17.74 2.26 1.75 e HANDLE PADLOCK e HANDLE PADLOCK DEMAND LOAD: 68.28KVA a AFCI BREAKER e HANDLE PADLOCK a AFCI BREAKER a AFCI BREAKER ☐ SPLIT BUS DEMAND LOAD: 6.47KVA ☐ SPLIT BUS SPLIT BUS DEMAND AMPS: 7.78A b GFCI BREAKER (5mA) f HANDLE CLAMP PHASE A: 66.35A PHASE B: 64.04A PHASE C: 64.04A HANDLE CLAMP PHASE A: 8.88A PHASE B: 8.16A PHASE C: 6.32A f HANDLE CLAMP PHASE A: 78.01A PHASE B: 88.52A PHASE C: 79.96A DEMAND AMPS: 64.81A b GFCI BREAKER (5mA) ☐ FEED THRU LUGS b GFCI BREAKER (5mA) ☐ FEED THRU LUGS ☐ FEED THRU LUGS c GFEP BREAKER (30mA) g RED CB HANDLE c GFEP BREAKER (30mA) g RED CB HANDLE c GFEP BREAKER (30mA) g RED CB HANDLE ☐ 200% NEUTRAL BUS & LUGS ☐ SUB FEED LUGS ☐ 200% NEUTRAL BUS & LUGS ☐ SUB FEED LUGS ☐ 200% NEUTRAL BUS & LUGS ☐ SUB FEED LUGS d Shunt Trip Breaker d SHUNT TRIP BREAKER d SHUNT TRIP BREAKER ☐ ISOLATED GROUND BUS ☐ INTEGRAL SPD/TVSS ☐ ISOLATED GROUND BUS ☐ INTEGRAL SPD/TVSS ☐ ISOLATED GROUND BUS ☐ INTEGRAL SPD/TVSS NOTES: (APPLICABLE TO PANELBOARD HL1C ONLY NOTES: (APPLICABLE TO PANELBOARD HM2B ONLY) NOTES: (APPLICABLE TO PANELBOARD HL2A ONLY) DISTRIBUTION MAIN AMPACITY: 800A CB MOUNTING: SURFACE LCP1 SCHEDULE ① LOCATION: RM M2X - ELECTRICAL MEZZANINE BUS AMPACITY: 800A SECTION: 1 OF 1 BASIS OF DESIGN: LEVITON GREENMAX 48 M2X SURFACE MOUNTED PANEL WITH KNOCKOUTS, NEMA 1 ENCLOSURE, WITH DIGITAL TIME CLOCK SERVICE: 3 PHASE, 4 WIRE, 208Y/120V ENCLOSURE: NEMA LIGHTING CONTROL SYSTEM RELAY PANEL FOR SWITCHED LOADS SERVICE ENTRANCE FULLY RATED MIN. RATING: 42K AIC RMS SYMMETRICAL AMPS LOCATION: ELEC ROOM M2X PANELBOARD LOCATION OF LUMINAIRE TYPE CONTROL TYPE NOTES LOCATION **VOLTAGE CHANNEL** MANUAL CONTROL OVERCURRENT PROTECTION LOAD DESCRIPTION FEEDER NOTES TYPE | P | FRAME | TA | AUX SINGLE POLE, N.C. RM 26 - NORTH WAREHOUSE - ZONE 1 DOORS 26.3, 26.2, 26.7, 26.9 12(HL2A) 277V C, C1 OCCUPANCY SENSOR, TIME CLOCK, SWITCH SINGLE POLE, N.C. 14(HL2A) 277V C, C1 RM 26 - NORTH WAREHOUSE - ZONE 2 OCCUPANCY SENSOR, TIME CLOCK, SWITCH DOORS 26.3, 26.2, 26.7, 26.9 6.12 -PANEL LR2A |3| 225 | 100 | REFER TO SINGLE LINE DIAGRAM SINGLE POLE, N.C. 16(HL2A) 277V C, C1 6.78 RM 26 - NORTH WAREHOUSE - ZONE 3 OCCUPANCY SENSOR, TIME CLOCK, SWITCH DOORS 26.3, 26.2, 26.7, 26.9 PANEL LR2B | 225 | 100 REFER TO SINGLE LINE DIAGRAM DOORS 26.3, 26.2, 26.7, 26.9 SINGLE POLE, N.C. 16(HL2A) 277V C, C1 RM 26 - NORTH WAREHOUSE - ZONE 4 PANEL LR1C |20.82| -OCCUPANCY SENSOR, TIME CLOCK, SWITCH 3 | 225 | 200 REFER TO SINGLE LINE DIAGRAM SINGLE POLE, N.C. 277V 16(HL2A) C, C1 RM 26 - NORTH WAREHOUSE - ZONE 5 DOORS 26.3, 26.2, 26.7, 26.9 PANEL LR1D |36.18| -3 | 225 | 200 REFER TO SINGLE LINE DIAGRAM OCCUPANCY SENSOR, TIME CLOCK, SWITCH 18(HL2A) 277V C, C1 25.50 SINGLE POLE, N.C. RM 26 - NORTH WAREHOUSE - ZONE 6 DOORS 26.3, 26.2, 26.7, 26.9 PANEL LR1E 3 | 225 | 150 REFER TO SINGLE LINE DIAGRAM OCCUPANCY SENSOR, TIME CLOCK, SWITCH 43.78 -SINGLE POLE, N.C 277V RM 26 - NORTH WAREHOUSE - ZONE 7 DOORS 26.3, 26.2, 26.7, 26.9 FANEL LR1F 3 225 200 REFER TO SINGLE LINE DIAGRAM 18(HL2A) OCCUPANCY SENSOR, TIME CLOCK, SWITCH RM 26 - NORTH WAREHOUSE - ZONE 8 SPD |3| 100 | 30 SINGLE POLE, N.C 277V 18(HL2A) DOORS 26.3, 26.2, 26.7, 26.9 OCCUPANCY SENSOR, TIME CLOCK, SWITCH B | EQUIPPED SPACE |3| 225 SINGLE POLE, N.C. 277V C, C1 RM 26 - NORTH WAREHOUSE - ZONE 9 DOORS 26.3, 26.2, 26.7, 26.9 20(HL2A) OCCUPANCY SENSOR, TIME CLOCK, SWITCH 9 EQUIPPED SPACE - |3| 225 10 | SINGLE POLE, DIMMING 277V RM 5 - COPY/PRINT DOORS 5.1, 5.2 22(HL2A) A, A1 OCCUPANCY SENSOR, DIMMER SWITCH 11 | SINGLE POLE, DIMMING 22(HL2A) 277V F, F1 RM 6 - TRAINING - DAYLIGHT ZONE PHOTOCELL, OCCUPANCY SENSOR, DIMMER SWITCH DOOR 6 **AUXILIARIES:** CONNECTED LOAD: 139.18KVA ✓ GROUND BUS 12 | SINGLE POLE, DIMMING 22(HL2A) 277V F, F1 RM 6 - TRAINING DOOR 6 OCCUPANCY SENSOR, DIMMER SWITCH a AFCI BREAKER e HANDLE PADLOCK DEMAND LOAD: 87.51KVA ☐ INTEGRAL SPD/TVSS 13 | SINGLE POLE, DIMMING b GFCI BREAKER (5mA) f HANDLE CLAMP 277V 22(HL2A) RM 4 - BREAK ROOM OCCUPANCY SENSOR, DIMMER SWITCH DOOR 4.1 DEMAND AMPS: 243.08A ☐ 200% NEUTRAL BUS & LUGS c GFEP BREAKER (30mA) g RED CB HANDLE SINGLE POLE, N.C. 22(HL2A) 277V A, A1, B, B1 RM 1 - VESTIBULE, RM 2 - LOBBY, RMS 11, 12 - CORRIDOR DOORS 1, 11 OCCUPANCY SENSOR, TIME CLOCK, SWITCH ☐ ISOLATED GROUND BUS d SHUNT TRIP BREAKER SPLIT BUS SINGLE POLE, N.C. 22(HL2A) 277V B, B1 RM 7 - WOMEN'S ROOM DOOR 7 OCCUPANCY SENSOR, SWITCH SINGLE POLE, N.C. 22(HL2A) 277V RM 8 - MEN'S ROOM DOOR 8 OCCUPANCY SENSOR, SWITCH SINGLE POLE, N.C 22(HL2A) 277V OCCUPANCY SENSOR NOTES: (APPLICABLE TO DISTRIBUTION PANEL LD2 ONLY) SINGLE POLE, N.C. 22(HL2A) 277V EXTERIOR LIGHTS - NORTH WAREHOUSE BUILDING PHOTOCELL, TIME CLOCK \_ 277V SINGLE POLE, N.C. 7(HL1C) EXTERIOR LIGHTS - SOUTH WAREHOUSE BUILDING M, N PHOTOCELL, TIME CLOCK SINGLE POLE, N.C. 2(HL2A) 277V C, C1 RM 21 - SOUTH WAREHOUSE - ZONE 1 STAIR EXIT OCCUPANCY SENSOR, TIME CLOCK, SWITCH MAIN AMPACITY: 1200A CB MOUNTING: SURFACE SINGLE POLE, N.C. 4(HL2A) 277V C, C1 RM 21 - SOUTH WAREHOUSE - ZONE 2 DOORS 11, 26.7, 26.9, 30F, 53.2 OCCUPANCY SENSOR, TIME CLOCK, SWITCH BUS AMPACITY: 1200A SECTION: 1 OF 1 **SWITCHBOARD** SINGLE POLE, N.C. 4(HL2A) 277V C, C1 RM 21 - SOUTH WAREHOUSE - ZONE 3 OCCUPANCY SENSOR, TIME CLOCK, SWITCH DOORS 11, 26.7, 26.9, 30F, 53. SERVICE: 3 PHASE, 4 WIRE, 480Y/277V ENCLOSURE: NEMA 1 | SWBD-MAIN 4(HL2A) 277V C, C1 SINGLE POLE, N.C. RM 21 - SOUTH WAREHOUSE - ZONE 4 DOORS 11, 26.7, 26.9, 30F, 53.2 OCCUPANCY SENSOR, TIME CLOCK, SWITCH METERING: NONE PULL SECTION: INCOMING SINGLE POLE, N.C. 277V RM 21 - SOUTH WAREHOUSE - ZONE 5 DOORS 11, 26.7, 26.9, 30F, 53.2 6(HL2A) OCCUPANCY SENSOR, TIME CLOCK, SWITCH ALIGNMENT: FRONT AND REAR DISTRIBUTION: GROUP MOUNTED SINGLE POLE, N.C 277V C, C1 RM 21 - SOUTH WAREHOUSE - ZONE 6 6(HL2A) DOORS 11, 26.7, 26.9, 30F, 53. ACCESS: FRONT ONLY OCCUPANCY SENSOR, TIME CLOCK, SWITCH ✓ SERVICE ENTRANCE FULLY RATED MIN. RATING: 65K AIC RMS SYMMETRICAL AMPS LOCATION: MAIN ELEC ROOM 277V C, C1 SINGLE POLE, N.C. RM 21 - SOUTH WAREHOUSE - ZONE 7 4(HL2A) OCCUPANCY SENSOR, TIME CLOCK, SWITCH DOORS 11, 26.7, 26.9, 30F, 53. SINGLE POLE, N.C 277V RM 21 - SOUTH WAREHOUSE - ZONE 8 6(HL2A) DOORS 11, 26.7, 26.9, 30F, 53. OCCUPANCY SENSOR, TIME CLOCK, SWITCH OVERCURRENT PROTECTION FEEDER NOTES LOAD DESCRIPTION 277V C, C1 SINGLE POLE, N.C. 1(HL1C) RM 21 - SOUTH WAREHOUSE - ZONE 9 DOORS 11, 26.7, 26.9, 30F, 53.2 OCCUPANCY SENSOR, TIME CLOCK, SWITCH | TYPE |P|FRAME| TA |AUX SINGLE POLE, N.C. 277V RM 20 - WAREHOUSE EQUIPMENT 8(HL2A) C, C1 OCCUPANCY SENSOR, SWITCH DOORS 20.1, 20.3 | PANEL LD2 (VIA XFMR) |139.2| -MCCB | 3 | 400 | 350 REFER TO ONE-LINE 277V 8(HL2A) C, C1 RM 151 - LAUNDRY AREA. RM 159 - LAUNDRY STORAGE SINGLE POLE, N.C. DOOR 36A.1 OCCUPANCY SENSOR, SWITCH MCCB | 3 | 225 | 150 | REFER TO ONE-LINE RM 24 - WAREHOUSE HIGH DENSITY STORAGE SINGLE POLE, N.C. 8(HL2A) 277V C, C1 OCCUPANCY SENSOR, SWITCH DOOR 24.1 PANEL HM2B MCCB | 3 | 225 | 225 REFER TO ONE-LINE 277V SINGLE POLE, N.C. 8(HL2A) C, C1 RM 25 - WAREHOUSE HIGH DENSITY STORAGE OCCUPANCY SENSOR, SWITCH DOOR 25.1 PANEL HL1C MCCB | 3 | 100 | 100 REFER TO ONE-LINE 1(HL1C) 277V SINGLE POLE, N.C. OCCUPANCY SENSOR SPARE MCCB | 3 | 225 | 225 MCCB 3 100 100 SPECIAL NOTES: (APPLY TO THIS DRAWING ONLY) | EQUIPPED SPACE B | EQUIPPED SPACE (1)TIMECLOCK CONTROL SHALL BE THE PRIORITY CONTROL. IF THE OUTDOOR LIGHT LEVEL DROPS BELOW AN ACCEPTABLE LEVEL THE PHOTOSENSOR SHALL TURN THE LIGHTS 'ON' EARLIER THEN SCHEDULED IN THE AFTERNOON/EVENING. IF THE LIGHT LEVEL **AUXILIARIES:** CONNECTED LOAD: 282.7KVA ✓ GROUND BUS IS NOT ADEQUATE IN THE MORNING WHEN THE LIGHTS ARE SCHEDULED TO TURN 'OFF', THE PHOTOSENSOR SHALL CONTROL a AFCI BREAKER e HANDLE PADLOCK DEMAND LOAD: 220.3KVA ☑ INTEGRAL SPD/TVSS THE LIGHTS TO REMAIN 'ON' UNTIL THE LIGHT LEVEL IS ADEQUATE. b GFCI BREAKER (5mA) f HANDLE CLAMP DEMAND AMPS: 265.1A ☐ 200% NEUTRAL BUS & LUGS c GFEP BREAKER (30mA) g RED CB HANDLE ☐ ISOLATED GROUND BUS d SHUNT TRIP BREAKER SPLIT BUS NOTES: (APPLICABLE TO SWITCHBOARD SWBD-MAIN ONLY) 1. PROVIDE GROUND FAULT PROTECTION ON MAIN CIRCUIT BREAKER. Approved: Chief, Facilities and Engineering Drawing Title Stamp/Seal Project Title ARCHITECT / ENGINEERS / CONSULTANTS: |Approved: DEPARTMENT OF VETERANS AFFAIRS 03/17/16 **ELECTRICAL SCHEDULES** WAREHOUSE RENOVATION **OKKS Studios, Inc.** Woods Peacock Engineering Consultants 2 Wisconsin Circle / Suite 820 Approved: Associate Chief for Maintenance And Operations, Perry Point & EXPANSION VA Project Number Chevy Chase, MD 20815-7003 5250 Cherokee Avenue, Suite 420 Alexandria, VA 22312-2052 512-530 Tel: (301) 718-0080 Tel: (703) 658-4400 Fax: (301) 718-9520 Nobis Engineering, Inc. Approved: Engineering Projects Supervisor Fax: (703) 658-4404 20410 Century Boulevard, Suite 230 www.okksstudios.com Approved: Associate Director for Operations |Building Number | | Checked | | Drawn Drawing Number Germantown, MD 20874 SCHEMATIC DESIGN (30%) SUBMISSION JFR MLS **Henry Adams Consulting** The Protection Engineering Tel: (301) 528 2010 DESIGN DEVELOPMENT (60%) SUBMISSION Approved: Infection Control Officer Group Engineers, LLC. CONSTRUCTION DOCUMENTS (90% SUBMISSION) 11/23/15 2809 Boston Street, Suite 7 600 Baltimore Ave, 4th Floor BID DOCUMENTS 03/17/16 Baltimore, MD 21224 USA Approved: Director, Medical Center Baltimore, MD 21204 sional Certification: I hereby certify that these documents wer Tel: (443) 708-4096 PERRY POINT, MD Tel: (410) 296-6500 repared or approved by me, and that I am a duly licensed professional engineer under the laws of the State of Maryland. Fax: (410) 296-6501 ense No. 41408 , Expiration Date: 1/5/2018

BUS AMPACITY: 225A

3.29 | 1.73

\_ | CKT\_BREAKER |

NOTE P TA AUX

MAIN TYPE: 150A MCB

KVA PER PHASE

PHASE A PHASE B PHASE C

3.29 3.69

SERVICE: 3 PHASE, 4 WIRE, 480Y/277 VOLTS

MIN. RATING: 35K AIC RMS SYMMETRICAL AMPS

CKT BREAKER

MOUNTING: SURFACE

**ENCLOSURE: NEMA 1** 

LOCATION: ELECTRICAL ROOM M2X

LOAD DESCRIPTION

LIGHTING - SOUTH WAREHOUSE

PANELBOARD HL1C

1 | LIGHTING - WEST

3 | LIGHTING - SOUTHWEST

LOAD DESCRIPTION

SECTION: 1 OF 1

| LIGHTING - MEZZANINE

BUS AMPACITY: 100A

PHASE A

\_ | CKT\_BREAKER |

- |1| 20 |

MAIN TYPE: 100A MCB

KVA PER PHASE

SERVICE: 3 PHASE, 4 WIRE, 480Y/277 VOLTS

MIN. RATING: 35K AIC RMS SYMMETRICAL AMPS

PHASE B PHASE C

CKT BREAKER .

MOUNTING: SURFACE

ENCLOSURE: NEMA 1

LOCATION: ELECTRICAL ROOM 29

LOAD DESCRIPTION

SECTION: 1 OF 1

BUS AMPACITY: 225A

\_ | CKT\_BREAKER |

PANELBOARD HM2B

1 | 360-AH3

LOAD DESCRIPTION

MAIN TYPE: 225A MCB

KVA PER PHASE

PHASE B

SERVICE: 3 PHASE, 4 WIRE, 480Y/277 VOLTS

MIN. RATING: 35K AIC RMS SYMMETRICAL AMPS

PHASE C

CKT BREAKER ...

IP TA AUX

MOUNTING: SURFACE

**ENCLOSURE: NEMA 1** 

LOAD DESCRIPTION

LOCATION: MECHANICAL ROOM M4X

PANELBOARD HL2A

| 1 | 360-AH-1

LOAD DESCRIPTION

SECTION: 1 OF 1

| LIGHTING - ROOM M3X

BUS AMPACITY: 225A MOUNTING: SURFACE MAIN TYPE: 200A MCB SECTION: 1 OF 1 PANELBOARD LR1D SERVICE: 3 PHASE, 4 WIRE, 208Y/120 VOLTS ENCLOSURE: NEMA 1 MIN. RATING: 10K AIC RMS SYMMETRICAL AMPS LOCATION: ELECTRICAL ROOM 33 NOTE CKT BREAKER
P TA AUX P TA AUX NOTE kva per phase LOAD DESCRIPTION LOAD DESCRIPTION PHASE B PHASE C PHASE A RECEPTACLES - RM 53 | 1 | RECEPTACLES - RMS 50,52,100 1.20 | 1.20 RECEPTACLES - RM 54 3 RECEPTACLES - RM 51 0.80 | 0.80 0.80 0.80 1 20 5 RECEPTACLES - RM 53 RECEPTACLES - RM 55 1 20 - 1.00 1.00 RECEPTACLES - RM 34 7 RECEPTACLES - RM 30 9 RECEPTACLES - RMS 25,26 RECEPTACLES - RM 35 11 RECEPTACLES - RM 25 OVERHEAD COIL DOOR, ROOM 30 12 0.80 | 1.20 | 1 | 20 | 3|13|360-P-HWR - RM 35 0.70 | 1.20 OVERHEAD COIL DOOR, ROOM 30 | 14 | 1 5 | 15 | HEAT PUMP 13 OVERHEAD COIL DOOR, ROOM 30 16 OVERHEAD COIL DOOR, ROOM 34 18 3.54 | 1.20 | 1 | 20 | 19 19 DOCK LIFT - |3| 30 | - **|** 1.80 | 1.90 DOCK LIFT 1.80 | 1.80 25 25 FLOOR SCALE 1.00 | 1.20 27 27 SUMP PUMP SPARE 29 29 SPARE 31 31 SPARE SPARE 3 33 SPARE SPARE SPARE 35 | 35 | SPARE 37 37 SPACE WITH PROVISIONS SPACE WITH PROVISIONS 39 39 SPACE WITH PROVISIONS SPACE WITH PROVISIONS 41 41 SPACE WITH PROVISIONS SPACE WITH PROVISIONS 5.70 | 6.50 | 7.64 | 4.60 | 6.94 | 5.00 CONNECTED LOAD: 36.38KVA ✓ GROUND BUS **AUXILIARIES:** 12.20 12.24 11.94 ☐ SPLIT BUS e HANDLE PADLOCK DEMAND LOAD: 25.71KVA a AFCI BREAKER b GFCI BREAKER (5mA) f HANDLE CLAMP PHASE A: 101.7A PHASE B: 102.0A PHASE C: 99.5A DEMAND AMPS: 71.41A ☐ FEED THRU LUGS c GFEP BREAKER (30mA) g RED CB HANDLE ☐ 200% NEUTRAL BUS & LUGS ☐ SUB FEED LUGS d SHUNT TRIP BREAKER ☐ ISOLATED GROUND BUS ☐ INTEGRAL SPD/TVSS NOTES: (APPLICABLE TO PANELBOARD LR1D ONLY)

P	ΑN	NELBOARD LR2A						MAIN TY SERVICE	MPACITY: YPE: 100 E: 3 PHA ATING: 22	OA MCB SE, 4 W		•				MOUNTING: SURFACE SECTION: 1 OF 1 ENCLOSURE: NEMA 1 LOCATION: ELECTRICAL ROOM	И M2X	
CKT FISC	<del>ا</del>	LOAD DESCRIPTION	NOTE	$\vdash$		EAKER									R NOT	E LOAD DESCRIPTION	R	
1				P		AUX		SE A	PHAS	SE B	PHA	SE C	P  	TA AU	X			
7		RECEPTACLES, ROOM M2X	-	1	20	-	0.60	1.16	0.00	1 1 0				20 -		20,	2	
3		360-AH1 RECEPTACLE	_		20	-			0.20	1.16	0.00	0.40		20 -		1744 1 00; 100W 20	4	
5	-	360-AH2 RECEPTACLE	<b>-</b>	1	20	_					0.20	0.40		20 -		ONTO: 1744 OTTE 1744EE	6	
/	_	360-AH6, 360-EF6 RECEPTACLE	_	1	20	-	0.40	0.40						20 -		OING: 1744 OINE 1744EE	8	
		REC: MECH M3X	_	1	20	_			0.20	0.60				20 -	·   -	ELEO ROOM 1744	10	
	_	LIGHTING RELAY PANEL	_	1	20	_					0.40	0.40		20 -	·	Elottino Continoe 17thee	12	
		SPARE	_	1	20	_	-	<u> </u>						20 -	·   -	OT /ITC	14	
		SPARE	_	1	20	_			-	-				20 -	·	SPARE	16	
	_	SPARE	_	1	20	_					-	_		20 -	-	SPARE	18 20	
19 1	9	SPARE	_	1	20	_	_	_					1	20 -	_	SPARE		
21 2	21	SPARE	_	1	20	_			_	_			1	20 -	·   -	SPARE	22	
23 2	23	SPARE	_	1	20	_					-	_	1	20 -	-	SPARE		
25 2	25	SPARE	_	1	20	_	_	_					1	20 -	.   –	SPARE	26	
27 2	27	SPARE	_	1	20	_			_	_			1	20 -	.   -	SPARE	28	
29 2	29	SPARE	_	1	20	_					_	_	1	20 -	·   -	SPARE	30	
31 3	31	SPARE	_	1	20	_	_	_					1	20 -		SPARE	32	
33 3	33	SPARE	_	1	20	_			_	_			1	20 -		SPARE	34	
35 3	35	SPARE	_	1	20	_					_	_	1	20 -	.   _	SPARE	36	
37 3	37	SPACE WITH PROVISIONS	_	1	_	_	_	_					1	-   -		SPACE WITH PROVISIONS	38	
39 3	39	SPACE WITH PROVISIONS	_	1	_	_			_	_			1	_   -	.   _	SPACE WITH PROVISIONS	40	
41 4	11	SPACE WITH PROVISIONS	_	1	_	-					_	_	1	_   -	.   _	SPACE WITH PROVISIONS	42	
	IIIV	ILIARIES:	·				1.00	1.56	0.40	1.76	0.60	0.80		COMME	OTED 14	DAD. 6 1914/A		
F		AFCI BREAKER e HA	ANDLE ANDLE ED CB	CLA	MP			56 : 21.33A	2. PHASE E	16 3: 18.00A		40 2: 11.67A		Deman Deman 200%	D LOAD D AMPS NEUTR	OAD: 6.12KVA	LUGS UGS	

NOTES: (APPLICABLE TO PANELBOARD LR2A ONLY)

PA	NELBOARD LR1E		RE, 208Y/120 VO MS SYMMETRICAL												
POE POE	LOAD DESCRIPTION	NOTE	OTF								KER	NOTE	LOAD DESCRIPTION		POLE
	RECEPTACLES - RMS 155,157	_		<b>TA</b> 20	AUX –	<b>PHASE A</b> 0.80 2.29	PHASE B	PHASE C	<b>P</b>    2	<b>TA</b> 7	AUX –	_	DRYER - RM 153		2
3 3	RECEPTACLES - RM 156	_	1 20 - 1.20 2.29								<b>}</b> }	4	4		
5 5	RECEPTACLES - RMS 152,153	_	1 :	20	_			1.00 1.80	1	20	_	_	WASHING MACHINE - RM 153	6	6
7 7	RECEPTACLES - RMS 151,159	_	1 :	20	-	1.20 1.00			1	20	-	_	RECEPTACLES - RMS 12,24	8	8
9 9	RECEPTACLES - RM 20	_	1 :	20	_		1.20 0.50		1	20	-	_	RECEPTACLES - RMS 21,25	10 1	10
11 11	OVERHEAD COIL DOOR, ROOM 36A	-	1 :	20	-			1.20 0.80	1	20	-	_	RECEPTACLES - RMS 36A,36B	12 1	12
13 13	OVERHEAD COIL DOOR, ROOM 36A	-	1	20	-	1.20 1.20			1	20	-	_	OVERHEAD COIL DOOR, ROOM 151	14 1	14
15 15	OVERHEAD COIL DOOR, ROOM 36B	-	1 :	20	-		1.20 0.50		1	20	-	_	RECEPTACLES - RM 25	16 1	16
17 17	OVERHEAD COIL DOOR, ROOM 36B	-	1	20	-			1.20 0.80	1	20	-	_	RECEPTACLES - RM 20	18 1	18
19 19	FLOOR SCALE	-	1 :	20	-	1.00 0.72			1	20	-	_	POWER DOOR	20 2	20
21 21	UH-1	_	1	20	-		1.20 –		1	20	-	_	SPARE	22 2	22
23 23	SPARE	_	1	20	-				1	20	-	-	SPARE	24 2	24
25 25	SPARE	-	1	20	-				1	20	-	_	SPARE	26 2	26
27 27	SPARE	_	1 :	20	-				1	20	-	-	SPARE	28 2	28
29 29	SPARE	_	1	20	-				1	20	-	_	SPARE	30 3	30
31 31	SPARE	_	1	20	-				1	20	-	-	SPARE	32 3	32
33 33	SPARE	-	1 :	20	-				1	20	-	_	SPARE	34 3	34
35 35	SPARE	-	1	20	-				1	20	-	_	SPARE	36 3	36
37 37	SPACE WITH PROVISIONS	-	1	-	-				1	-	-	-	SPACE WITH PROVISIONS	38 3	38
39 39	SPACE WITH PROVISIONS	_	1	-	_				1	-	-	_	SPACE WITH PROVISIONS	40 4	40
41 41	SPACE WITH PROVISIONS	-	-				1	-	-	_	SPACE WITH PROVISIONS	42 4	42		
	b GFCI BREAKER (5mA) f HA	NDLE F NDLE C D CB F	LAM	Р		4.20       5.21       4.80       4.49       3.40       3.40         9.41       9.29       6.80         PHASE A: 78.42A PHASE B: 77.42A PHASE C: 56.67A				CONNECTED LOAD: 25.5KVA ✓ GRO  DEMAND LOAD: 19.3KVA ☐ SPI					

NOTES: (APPLICABLE TO PANELBOARD LR1E ONLY)

P/	ANELBOARD LR2B		BUS AMPACITY: 100A  MAIN TYPE: 100A MCB  SERVICE: 3 PHASE, 4 WIRE, 208Y/120 VOLTS  MIN. RATING: 22K AIC RMS SYMMETRICAL AMPS										MOUNTING: SURFACE SECTION: 1 OF 1 ENCLOSURE: NEMA 1 LOCATION: MECHANICAL ROOM M4X				
SKI F	LOAD DESCRIPTION	NOTE	NOTE -						(T BRE		NOTE	LOAD DESCRIPTION					
1 1	FAN 360-EF-6		P	<b>TA</b> 20	AUX	<b>PHASE A</b> 0.70 1.16	PHASE B	PHASE C	۲ <u>۲</u> آ 1	20	AUX		FAN E C6 DOOM 25	2 2			
7 7	360-AH3 RECEPTACLE	-   _	1	20		0.70	0.20 1.16		1	20	_		FAN F-C6, ROOM 25	4			
5 5	360-AH4, 360-AH5 RECEPTACLE	_	1	20	_		0.20 1.10	0.20 1.16	1	20	_	-	FAN F-C6, ROOM 25	6			
3   3 7   7	360-PHP-7	_	1	20	_	0.60 0.40		0.20 1.10	1 1	20	_		REC: ROOF	8			
9 9	360-PHP-4	_	1	20	_	///////////////////////////////////////	0.60 –		1	20			SPARE	10 1			
	1 360-PHP-5	_	1	20	_			0.60 –	1	20	_		SPARE	12 1			
	3 SPARE	_	1	20	_	<i>-</i> -			1	20	_	-	SPARE	14 1			
	5 SPARE	_	1	20	_				1	20	_		SPARE	16 1			
	7 SPARE	_	1	20	_			<i>-</i>	1	20	_	-	SPARE	18 1			
_	9 SPARE	_	1	20	_				1	20	_		SPARE	20 2			
21 2	1 SPARE	_	1	20	_		<i>- -</i>		1	20	_	-	SPARE	22 2			
23 23	3 SPARE	_	1	20	-				1	20	_	-	SPARE	24 2			
25 25	5 SPARE	_	1	20	-				1	20	-	-	SPARE	26 2			
27 27	7 SPARE	_	1	20	_				1	20	-	-	SPARE	28 2			
	9 SPARE	_	1	20	-				1	20	_	1	SPARE	30 3			
31 3	1 SPARE	_	1	20	-				1	20	_	1	SPARE	32 3			
33 33	3 SPARE	-	1	20	-				1	20	-	-	SPARE	34 3			
35 35	5 SPARE	-	1	20	-				1	20	1	-	SPARE	36 3			
37 37	7 SPACE WITH PROVISIONS	_	1	-	_				1	-	-	_	SPACE WITH PROVISIONS	38 3			
39 39	SPACE WITH PROVISIONS	_	1	-	-				1	-	1	1	SPACE WITH PROVISIONS	40 4			
41 4	1 SPACE WITH PROVISIONS	_	1	_	_				1	-	-	ı	SPACE WITH PROVISIONS	42 4			
Al	b GFCI BREAKER (5mA) f HA	ANDLE ANDLE	CLA	MP		1.30   1.56 2.86 PHASE A: 23.83A	0.80   1.16 1.96 PHASE B: 16.33A	0.80   1.16 1.96 PHASE C: 16.33A	]	DEM	IAND I	LOAD: (	D: 6.78KVA				
	c GFEP BREAKER (30mA) g RE d SHUNT TRIP BREAKER	ED CB	HAN	NDLE									BUS & LUGS  SUB FEED I  JND BUS  INTEGRAL SI				

NOTES: (APPLICABLE TO PANELBOARD LR2B ONLY)

COMBINATION MOTOR STARTER DISCONNECT SCHEDULE																	
					DISCONNECT MOTOR STARTER							CONTROLS					
DESIGNATION	VOLTS	POLES	NEMA ENCL	CIRCUIT BREAKER	DISCONNECT SWITCH	DUAL ELEMENT FUSE	TYPE	NEMA SIZE	COIL VOLTS	AUXILLIARY CONTACTS	OVERLOAD HEATERS	TRANSFORMER	PUSH BUTTON	PILOT LIGHT	SELECTOR SWITCH	NOTES	
CMS-DOCK LIFT	208V	3	3R	-	30A	30A	_	1	_	_	NOTE 1	NOTE 2	NOTE 3	NOTE 4	NOTE 5	NOTE 6	

NOTES: (APPLICABLE TO COMBINATION MOTOR STARTER DISCONNECT SCHEDULE ONLY)

- 1. ELECTRICAL CONTRACTOR SHALL SIZE OVERLOAD HEATERS IN FIELD PER ACTUAL MOTOR NAMEPLATE DATA.
- 2. UNIT SHALL BE EQUIPPED WITH CONTROL TRANSFORMER WITH 480V PRIMARY AND 120V FUSED SECONDARY.
- 3. UNIT SHALL BE EQUIPPED WITH RED "RUN" AND GREEN "STOP" PUSHBUTTONS.
- 4. UNIT SHALL BE EQUIPPED WITH RED "RUN" AND GREEN "OFF" PUSH TO TEST TYPE PILOT LIGHTS.
- 5. UNIT SHALL BE EQUIPPED WITH HOA SELECTOR SWITCH.

Additions:	Date	ARCHI
		OKKS Studios, Inc. 2 Wisconsin Circle / Sui Chevy Chase, MD 208 <sup>2</sup> Tel: (301) 718-0080 Fax: (301) 718-9520
Revisions:	Date	www.okksstudios.com
SCHEMATIC DESIGN (30%) SUBMISSION	03/25/15	Henry Adams Consulti
DESIGN DEVELOPMENT (60%) SUBMISSION	09/11/15	Engineers, LLC.
CONSTRUCTION DOCUMENTS (90% SUBMISSION)	11/23/15	600 Baltimore Ave, 4th I
BID DOCUMENTS	03/17/16	Baltimore, MD 21204
		Tel: (410) 296-6500 Fax: (410) 296-6501

ARCHITECT / ENGINEERS / CONSULTANTS: Woods Peacock Engineering Consultants KKS Studios, Inc. Wisconsin Circle / Suite 820

Chevy Chase, MD 20815-7003 5250 Cherokee Avenue, Suite 420 Alexandria, VA 22312-2052 el: (301) 718-0080 Tel: (703) 658-4400 x: (301) 718-9520 Nobis Engineering, Inc. Fax: (703) 658-4404 20410 Century Boulevard, Suite 230 ww.okksstudios.com Germantown, MD 20874 The Protection Engineering enry Adams Consulting Tel: (301) 528 2010 igineers, LLC. 2809 Boston Street, Suite 7 00 Baltimore Ave, 4th Floor

SULTANTS:	Stamp/Seal
oods Peacock Engineering Consultants	OF MARLINA
Cherokee Avenue, Suite 420 Alexandria, VA 22312-2052	
Tel: (703) 658-4400 Fax: (703) 658-4404	No. 41408
The Protection Engineering Group	3/17/16
2809 Boston Street, Suite 7	
Baltimore, MD 21224 USA Tel: (443) 708-4096	Professional Certification: I hereby certify that these documents were prepared or approved by me, and that I am a duly licensed profession engineer under the laws of the State of Maryland.

	Approved:	Approved: Chief, Facilities and Engineering	Dr
		Approved: Associate Chief for Maintenance And Operations, Perry Point	
		Approved: Engineering Projects Supervisor	A
		Approved: Infection Control Officer	
were ssional			A

PA	NELBOARD LR1F						MAIN TO		DA MCB SE, 4 W	IRE, 208\ MS SYMM	•					MOUNTING: SURFACE SECTION: 1 OF 1 ENCLOSURE: NEMA 1 LOCATION: COPY/PRINT RO	OM 5	
CKT	LOAD DECODIDATION	NOTE	CKT BREAKER		KVA PER PHASE						СК	CKT BREAKER		NOTE	LOAD DECODINE	T	<u></u>	
동	LOAD DESCRIPTION	NOTE	Р	TA	AUX	PHA	PHASE A		PHASE B		PHASE C		TA /	AUX	NOTE	LOAD DESCRIPTION	ਠਿੱ	CKT
1 1	RECEPTACLES, ROOM 5A	_	1	20	_	0.80	0.80					1	20	-	_	RECEPTACLES, ROOM 5C	2	2
3 3	RECEPTACLES, ROOM 5B	_	1	20	-			0.80	0.80			1	20	-	_	RECEPTACLES, ROOM 5D	4	4
5 5	RECEPTACLES, ROOM 5	_	1	20	-					1.20	1.80	1	20	-	_	COPIER, ROOM 5	6	6
7 7	COPIER, ROOM 5	_	1	20	_	1.80	1.80					1	20	-	_	COPIER, ROOM 5	8	8
9 9	COPIER, ROOM 5	_	1	20	_			1.80	1.80			1	20	-	_	COPIER, ROOM 5	10	10
11 11	COPIER, ROOM 5	_	1	20	_					1.80	0.80	1	20	-	_	RECEPTACLES, ROOM 6	12	2 12
13 13	MICROWAVE, ROOM 4	_	1	20	_	1.20	0.80					1	20	-	_	RECEPTACLES, ROOM 6	14	1 14
15 15	REFRIGERATOR, ROOM 4	_	1	20	b			1.44	0.80			1	20	-	_	RECEPTACLES, ROOMS 1,2,7	16	3 16
17 17	REFRIGERATOR, ROOM 4	_	1	20	b					1.44	0.80	1	20	-	_	RECEPTACLES, ROOMS 6,11,12	18	3 18
19 19	RECEPTACLES, ROOM 4	_	1	20	_	0.60	1.00					1	20	-	_	RECEPTACLES, ROOM 26	20	20
21 21	RECEPTACLES, ROOM 10	_	1	20	_			0.40	1.20			1	20	-	_	OVERHEAD COIL DOOR, ROOM 2	6 22	2 22
23 23	FAN F-C6, ROOM 26	_	1	20	-					0.60	1.20	1	20	-	_	OVERHEAD COIL DOOR, ROOM 2	6 24	1 24
25 25	FAN F-C6, ROOM 26	_	1	20	-	1.16	1.70					1	20	-	_	OVERHEAD COIL DOOR, ROOM 2	6 26	3 26
27 27	FAN F-C6, ROOM 26	_	1	20	_			1.16	1.70			1	20	-	_	OVERHEAD COIL DOOR, ROOM 2	6 28	3 28
29 29	FAN F-C6, ROOM 26	_	1	20	_					1.16	1.70	1	20	-	_	OVERHEAD COIL DOOR, ROOM 2	6 30	30
31 31	FAN F-C6, ROOM 26	_	1	20	-	1.16	0.60					1	20	-	-	UNIT HEATER UH-1	32	2 32
33 33	FAN F-C6, ROOM 26	_	1	20	_			1.16	0.72			1	20	-	_	POWER DOOR	34	1 34
35 35	FAN F-C6, ROOM 26	_	1	20	_					1.16	_	1	20	-	-	EXTERIOR LIGHTING	36	36
37 37	FAN F-C6, ROOM 26	_	1	20	_	1.16	_					1	20	-	_	SPARE	38	38
39 39	FAN F-C6, ROOM 26	_	1	20	_			1.16	_			1	20	-	_	SPARE	40	40
41 41	360-PHP-6	_	1	20	-					0.60	_	1	20	-	_	SPARE	42	2 42
43 43	SPARE	_	1	20	_	_	_					1	20	-	_	SPARE	44	1 44
45 45	SPARE	_	1	20	-			-	_			1	20	-	-	SPARE	46	6 46
47 47	SPARE	_	1	20	_					_	_	1	20	-	_	SPARE	48	3 48
49 49	SPARE	_	1	20	_	_	_					1	20	-	-	SPARE	50	50
51 51	SPARE	_	1	20	_			-	_			1	20	-	_	SPARE	52	2 52
53 53	SPARE	_	1	20	_					_	_	1	20	-	_	SPARE	54	1 54
55 55	SPACE WITH PROVISIONS	_	1	_	_	_	_					1	-	-	_	SPACE WITH PROVISIONS	56	5 56
57 57	SPACE WITH PROVISIONS	_	1	-	_			-	_			1	-	-	_	SPACE WITH PROVISIONS	58	3 58
59 59	SPACE WITH PROVISIONS	_	1	_	-					_	_	1	-	-	_	SPACE WITH PROVISIONS	60	60
ALIV	VII IADIEC:	•	•		•	7.88	6.70	7.92	7.02	7.96	6.30	Γ	CONIN	JEOTI	D 104	D. 47.70M/A		•
	b GFCI BREAKER (5mA) f F c GFEP BREAKER (30mA) g R	HANDLE ( HANDLE ( RED CB	CLA	MP	(		.58 : 121.5A		.94 3: 124.5A	14 PHASE C	.26 : 118.8A		DEMA DEMA 200	AND I AND A D% N	_OAD: \ AMPS: EUTRAL	D: 43.78KVA	LUGS _UGS	
(	d Shunt Trip Breaker												☐ ISO	LATEI	) GROU	JND BUS INTEGRAL S	D/TV	1

NOTES: (APPLICABLE TO PANELBOARD - ONLY)

F	PANELBOARD LR1C					MAIN TY SERVICE	MPACITY: 225A MPE: 200A MCB E: 3 PHASE, 4 WI NTING: 10K AIC RI	•				MOUNTING: SURFACE SECTION: 1 OF 1 ENCLOSURE: NEMA 1 LOCATION: ELECTRICAL ROOM	29
CKT	LOAD DESCRIPTION	NOTE			EAKER		KVA PER PHASE		$\overline{}$	T BREAK	— N∩	TE LOAD DESCRIPTION	KI KI
1		+_	P	<b>TA</b> 20	AUX –	<b>PHASE A</b> 1.20 1.20	PHASE B	PHASE C	P 1	<b>TA A</b> I 20 -		DECEDITACIES DAS 141 142	2
3	1 RECEPTACLES RMS 132,134 3 RECEPTACLES RMS 133,135	<del>  -</del>	1	20		1.20 1.20	1.20 0.40		1	20 -		7.2027 7.00220 7.110 7.11,7.12	4
5	5 RECEPTACLES RMS 136,137	<del>  -</del>	1	20			1.20 0.40	<i>/////////////////////////////////////</i>	1	20 -		DESCRIPTION FO. SORD DATE 400 400	+
7	7 RECEPTACLES RMS 129,130		1	20		1.20 1.44		1.20 1.00	1	20 -	_		8
9	9 RECEPTACLES RM 131		1	20	<u> </u>	1.20 1.44	0.60 0.20		1	20 -			10
	11 RECEPTACLES RM 128		1	20	_		0.00 0.20	1.00 0.20	1	20 -		DE0EDT1015 D11 444	12
	13 VAV BOXES	_	1	20	_	0.40 0.80		///////////////////////////////////////	1	20 -		DE0EDT10150 D110 111115	14
	15 RECEPTACLES RM 140		1	20		0.40 0.00	0.80 1.00		1	20 -			16
	17 RECEPTACLES RM 139	_	1	20	_		0.00 1.00	0.80 0.98	1	20 -		0.155.105.5105.011.511.444	18
	19 RECEPTACLES CORRIDOR	_	1	20	_	0.80 –		//////////////////////////////////////	1	20 -		00105	20
	21 LIGHTING	_	1	20		///////////////////////////////////////	1.00 –		1	20 -	_	00405	22
	23 LIGHTING	_	1	20	_			<i>/////////////////////////////////////</i>	1	20 -	_	- SPARE	24
	25 LIGHTING	_	1	20	_	0.90 –			1	20 -	_		26
	27 LIGHTING	_	1	20	_	///////////////////////////////////////	0.70 –		1	20 -	_	- SPARE	28
	29 LIGHTING	_	1	20	_			0.70 –	1	20 -	_	ODADE	30
	31 SPARE	_	1	20	_	<i>/////////////////////////////////////</i>			1	20 -	_	- SPARE	32
	33 SPARE	_	1	20	_		<i>-</i> –		1	20 -	-   -	- SPARE	34
	35 SPARE	_	1	20	_			<i>/////////////////////////////////////</i>	1	20 -	-   -	ODADE	36
_	37 SPACE WITH PROVISIONS	_	1	_	_				1	_   .	_	ODAGE WITH DROVIGIONS	38
	39 SPACE WITH PROVISIONS	_	1	_	_		/ <i>////////////////////////////////////</i>		1	_   -	_   _	- SPACE WITH PROVISIONS	40
	41 SPACE WITH PROVISIONS	_	1	_	_			<i>/////////////////////////////////////</i>	1	_   -	_   _	ODAGE WITH PROVIDIONS	42
	AUXILIARIES:	HANDLE PADLOCK HANDLE CLAMP RED CB HANDLE				4.50 3.44 7.94	4.30 1.60 5.90	4.80 2.18 6.98				.OAD: 20.82KVA ☑ GROUND BUS	
	b GFCI BREAKER (5mA) f						PHASE B: 49.17A		DEMAND LOAD: 18.25KVA SPLIT BUS DEMAND AMPS: 50.69A FEED THRU LUGS  200% NEUTRAL BUS & LUGS SUB FEED LUGS ISOLATED GROUND BUS INTEGRAL SPD/TVSS				

NOTES: (APPLICABLE TO PANELBOARD LR1C ONLY)

**FULLY SPRINKLERED** Drawing Title Project Title 03/17/16 ELECTRICAL SCHEDULES WAREHOUSE RENOVATION & EXPANSION VA Project Number 512-530 | Building Number | Checked | Drawn Approved: Associate Director for Operations Drawing Number JFR | MLS | Approved: Director, Medical Center

DEPARTMENT OF VETERANS AFFAIRS

Fax: engineer under the laws or the state or many constitution. License No. 41408, Expiration Date: 1/5/2018

PERRY POINT, MD